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BUSINESS SECRETS

CARL B. ROBBINS

EVERY CORPORATION should be compelled by law to publish complete detailed reports of its internal affairs! This shocking proposal is receiving considerable attention in the United States today. A book has come forth on the subject; magazines and newspapers have given much space to it; legislators are being pressed to consider its soundness. Unfortunately, however, the layman will search in vain for much of anything on the topic other than downright propaganda. The literature is confusing and unsystematic; it is biased and unfair—in a word, dangerous.

On one side of the question stand those reformers who urge adoption of the proposal on the ground that it would protect defenseless stockholders from being swindled by corporate managers and would in other ways contribute to the public welfare. The opposition is composed of those corporate managers who maintain that the proposed laws would not only fail to produce the good results expected of them, but would also hamper business activity and progress. For their conflict these contestants have produced the most mysterious engines of war, which are heavily camouflaged and sometimes emit flares of blinding brilliance, but generally operate under heavy smoke screens. All wars are marked by lulls between battles when the mad feverish fighting ceases temporarily, periods during which the thunder and blazes and smoke die away, thus affording an opportunity for the neutral reporter to make an inspection and furnish his readers with an account of what is happening behind the scenes. Still speaking metaphorically, such a lull has occurred in the war under discussion, during which the defendants apparently are reconstructing their campaign plans to regain the ground they lost when Professor Ripley led the big drive with his *Main Street and Wall Street*. It was at this point that your reporter prowled through both camps taking inventory. The following account of the stock-in-trade found in each camp is a brief enumeration of the instruments of war, together with explanations of their operation and estimates of their importance. Particular care has been taken to point out the cleverly deceptive camouflage covering most of the contrivances.

At the outset it is necessary to restate the vague proposal, if possible, in more definite terms. What are "complete detailed reports of internal affairs"? Apparently "complete" reports would include at least a statement of affairs, or balance-sheet, and a statement of incomes and expenses, or operating statement. That which constitutes a "detailed" report cannot be defined sharply. Detailing or subdividing is a matter of degree. It is

obvious that the proposal desires to dispose of large groupings of items; the fixed assets, for example, would appear in the balance sheet not as a single group, but separate figures would be given for land, buildings, equipment, etc., and likewise the liabilities, incomes, and expenses would be itemized. The degree or extent of this subdivision of items can be stated only in the most general terms. Apparently it is intended to secure for public inspection reports which are detailed at least as fully as is customary in the particular trade for the use of creditor banks.

As often stated the proposal reads that corporations should be compelled to "publish" detailed reports: Yet it is obvious from the context of the literature that it is not intended to attach a literal meaning to the word publish. More specifically the intention is that a copy of the reports should be mailed to every stockholder and a copy filed in governmental records which are open for public inspection.

With these conceptions of the proposal in mind we proceed with a discussion of its virtues and shortcomings. First the reputed advantages of the plan will be analyzed; then the objections to the scheme will be examined; and finally some general observations and conclusions will be given.

(a) A stockholder who insists upon an explanation of why his demands for information have been denied is likely to receive from the corporate management a reply of this nature: "There are several reasons why the corporation must refuse to give out information of its internal affairs. For example, if it should be made known that we were reaping large profits, an army of competitors would swoop in upon us; prices would be cut, and our profits scattered to the four winds. Or on the other hand, if it leaked out that we were not doing as well as in years past, we would encounter an insuperable obstacle when we enter the money market next spring to raise funds for purchasing our supply of raw materials. If you will stop and consider it a moment, Mr. Stockholder, you will see that we are compelled to keep things a little secret just to protect the best interest of yourself and your corporation."

This is assuredly valid logic and business acumen, and the stockholder departs with the happy thought that his funds are being managed by a group of competent business men. He is satisfied; the management is satisfied—should the public lawmaker concern himself further with the case? In spite of the fact that the above analysis would indicate the contrary, the correct answer appears to be an affirmative. Let's explain:

Suppose that in fact the corporation is inefficiently managed and small operating losses are being incurred. Then it follows that additional funds supplied this corporation by the money market, whether loaned outright or given in return for stock, will be wasted. More specifically, the materials and labor purchased by these funds, once they are in possession of the corporation, will be wasted. Wasted in the sense that more finished products would have been fabricated from them if their control had passed into more efficient hands. And this waste might have been avoided if the suppliers of capital had been informed accurately beforehand of the trend of the business. For neither money lenders nor stock purchasers are anxious to encourage the operations of losing business concerns.

In a case of inefficient management, were the facts made known, the natural course of business devolution would substitute a capable management. While on the other hand if the losses were attributable not to incompetent executives but rather to other causes outside executive control, the business assets would be liquidated or converted to another line of production. In either instance further waste of materials and labor would be avoided.

This situation is puzzling at first sight in the light of an obvious question: Why should corporate directors and managers,

who are stockholders themselves, wish to continue operations when nothing other than a long line of losses is in prospect for the future? The same question was put by a perplexed man who wanted to know, "Why do those chronic losers among New England cotton mills stay in business?" Certainly it is not logical to suppose that directors would wish to continue operations if they did not expect that a change in their business conditions would arrive eventually to change the complexion of the red ink figures. But this superficial logic is not to be relied upon, for circumstances are often such that it pays the directors to carry on the struggle, and keep losses at a minimum, long after all hope of ultimate profits has vanished. Explanation of this paradox may be found in the fact that those in control of a corporation are receiving such high salaries for their services that the loss through not receiving dividends on their stock is relatively insignificant. In other words the high salary may mean much more than the lack of dividends and to discontinue business would destroy the salary. It is also true that not much in the form of dividends needs be foregone, for in most states only a few shares of stock must be owned in order to qualify their holder for election to the directorate. Directors of corporations organized under the laws of Delaware need not be stockholders. When there is a large amount of stock widely held, and a ready market for it exists, it is not impossible for outsiders to step into these positions. The procedure is simply for a few friends to enter the market and buy a large block of stock, elect one another to the directorate, place themselves in executive positions and fix their own salaries, then sell their stock back to the market—perhaps at a small loss—and invest their funds in the dividend paying stocks of other corporations. The only problem is to oust those already in control.

The high salaried position is the important thing. Where is the branded failure of the business world to turn for another position without a drastic reduction in salary? When one considers that a reputation for producing profits is the most important of an executive's personal assets, it is not difficult to understand why some corporations continue to operate at a loss in the face of an eternal ebb tide.

Against this advantage of early detection and elimination of the invalid enterprise or the incompetent management, one must set a qualifying objection. The early life of many of our most successful business enterprises has been marked by severe growing-pains; heavy losses were suffered for the first few years while the concerns were gaining their foothold, and these had to be met by additional contributions by stockholders to the original capital fund. In such instances it is difficult to raise the additional funds when the new prospective stockholders have been forewarned of the current losses sustained by the corporation. Therefore it is argued, and not without a show of reason, that a law which compelled publicity of all corporate information might operate like a frost to nip-in-the-bud many really sound business projects. Similarly it is said some established concerns might be liquidated at the clamorous demands of excited stockholders when the businesses ran into a stretch of losses as a result of bad business conditions, whereas if the losses had been concealed, the concerns might weather the storm and eventually reach the open sea of high profits again. This picture is painted by making it analogous to an unreasoned run on a temporarily embarrassed bank, which is fundamentally sound although it has been crippled by a run because its assets were not very liquid. Had it not been for some alarming news everything would have gone along very nicely.

It is perhaps true that these objections are more impressive than their real significance justifies; certainly their weight does not stack up well against the advantage for importance.

(b) Another advantage attributed to the proposal is that it would avoid the payment of excessive executive salaries. No one doubts that there are many overpaid corporate executives. This offense is most prevalent in those corporations whose directors and executives are the same group of men; they fix their own salaries and no man is inclined to be very strict with himself. The condition of overpaid management may exist for a long period without detection if the proper circumstances are attendant. First, the executives must refrain from bragging about their large incomes and resist any temptation to put on vulgar display; second, they must make their salaries and positions secure by maintaining their continued election to the directorate; and finally, the corporation must be favored by some circumstance which permits it to earn more than an average or normal income on its investment. These are the ideal conditions, but a much less favorable set of circumstances may place the management in position to turn the trick in its own favor. It hardly needs be added that where these conditions obtain, and itemized expense and income reports are not made public, a strong temptation exists for the directors to overpay themselves.

It is not a rare experience at all to discover corporations which are producing average net profits and paying normal dividends for their industry, but which on account of some great advantage such as monopoly, favorable location, or brand reputation, should be earning much more than their less fortunate competitors. The surplus profits which should be delivered to stockholders in increased dividends are absorbed in the expense accounts by the payment of excessive salaries. If detailed expense reports were available for all corporations, these men would be forced to reduce their own salaries or explain why the unit cost for management of their corporations is so much higher than that of competitors. Were the writer inclined to point a finger at specific offenders and call their names, the reader would be furnished with some highly entertaining and glaring examples of this abuse. Possibly it would not be a breach of policy to mention one very amusing example provided all names and clues are withheld. The management of the corporation in mind is favored with all the ideal conditions mentioned above for the payment of excessive salaries. The executives are directors; the corporation possesses a very lucrative monopoly, so lucrative in fact that enormous profits are reaped regardless of the gross mismanagement of the concern. And it is not a small corporation; it has considerably over 1,000 employees. The general manager is a young man who was educated in one of the fine arts and never had any business experience except in his present capacity of general manager! All his life interest appears to be centered in a popular form of sport to which he is the most loyal devotee. Last winter he purchased exactly three times the quantity normally required of an important raw material. This in itself would not have been so bad, but the material was highly perishable and had to be kept in refrigeration. In the spring the warehouse foreman notified the general manager at his business office that two-thirds of the raw material could not be kept any longer without spoiling. He then asked whether it should be sold on the open market. The general manager, who until this point had hardly lifted his eyes from an historical treatise of his favorite sport responded, "too bad," and resumed his history. The supply was left in storage until it had spoiled completely.

This is of course a rare and extreme case, perhaps it is unique, yet it does illustrate what alarming things may be going on behind the screens of secrecy, while on the surface a corporation may appear normally profitable and (hence) well-managed.

(c) The third advantage claimed for the proposed legislation is that it would

reduce excess profits. For illustration, let us consider those corporations which are managed efficiently and honestly and for which profits are accumulating rapidly. Suppose the facts are being kept under cover at present, but some day there will be a grand party of melon cutting—large dividend distribution. Even here, it is maintained, the public interest demands that the preparation for such festivities be exposed. Make the facts known and competitors will enter the field (unless it be one of secured monopoly or unless the industry be one in which it is difficult to gain a foothold because it is subject to diminishing costs as production increases). As competitors enter the field prices will be lowered to a point that in the long run will yield profits just sufficient to keep up production.

Wherein has the public been benefited? The gain will result from a better distribution of wealth. The surplus profits, that is, gains in excess of the minimum necessary to encourage the corporations to continue production, will be retained by the consumers of the goods who receive them at lower prices. The advantage of a more even distribution of wealth rests, of course, on the assumption that the total sum of happiness of the citizens of a country increases with greater equality in the division of wealth. Upon this basis is founded the objection, in a final analysis, to all excess profits, or better, monopoly gains. In each instance complaint is made of the fact that the public is paying more that the minimum required to encourage production. In this connection it should be borne in mind that monopoly is a matter of degree. Every producer who possesses some important advantage over his competitors, such as a better location, brand reputation, selling force, or manufacturing or distribution facilities, has a partial monopoly. It may be only temporary, but for the time being at least he is a monopolist. And it is seldom that any producer secures a complete monopoly. One may be protected against competition by patent rights, yet even then one must consider the other products which are competing for the consumer's dollar.

The proposed law seeks to expose the excessive profits of all these partial monopolists who are allowed to reap monopoly gains because potential competitors are held in ignorance of the actual situation.

Our discussion of this advantage is quite incomplete. For example, no consideration was given to the effect of a lower price level (for the industry) or to the effect of changing from one price level to another. The higher purchasing power of money was not distinguished from a lower commodity price level. In discussing the benefits of an even distribution of wealth, no mention was made of the fact that a general rise in the scale of living is not inconsistent with greater disparity of purchasing power. And the possible inefficiency of the new competitors who enter a profitable field was overlooked above. These things were pushed into the discard not because they have no important bearing on the problem, for they have, but because they are questions primarily of academic interest whose explanation requires an extended treatment far out of proportion to their significance. The space limitation of a brief survey precludes anything beyond their mere mention.

Two factors, however, which have been omitted thus far in the discussion are of paramount importance to the problem. First, an additional word must be said about monopolies, and second, an important qualification has to be made to the assumption of the general beneficence of unrestrained competition. From these topics comes the subject matter of the next three advantages of the proposal.

(d) The theory of enforced competition cannot be applied unflinchingly to all business concerns. To do so would result very often in great waste. One railroad can furnish transportation at lower cost than two competing lines. Likewise it is wasteful to duplicate electric lines, gas

pipes, and water mains. In order to avoid the economic waste that competition in rendering such services would entail, the operators are granted a franchise or monopoly rights. But monopolists cannot be trusted to refrain from taking advantage of their strategic position; public service commissions are created to prohibit the utilities from exacting exorbitant charges for their services. When it was learned that some industries were so-called natural monopolies, that is, some services could be rendered more cheaply by a single non-competing organization, we were forced to choose between government ownership and private ownership under public regulation. With some exceptions we chose the latter alternative, our selection being swayed chiefly by the superior efficiency of private ownership which retains the spur to individual gain.

The problem of controlling these monopolies is two-fold: First of all, the public commissions must see that customers of the utilities receive reasonably good service; and second, they must prevent the companies from charging rates any higher than necessary to yield a fair income on the investment. The history of how the various state and local public commissions have performed their task is not a beautiful story. Much of the work has been done in a hit-or-miss fashion. Frequently no inspections were made until a company which had been accumulating excess earnings for several years, suddenly announced an abnormally large extra dividend. Then the customers, who are not slow in recognizing that they have been overcharged, rise up with cries of rebellion. Finally, the public commission makes a solemn announcement that it is making a special investigation of the company's affairs. After a few months a report is published stating that the investigating committee has discovered that customers have been overcharged. Remarkable! The commission then orders a downward revision of rates and the company is forgotten until the same round of events is repeated again. It's the old, old story of locking the barn after the horse has been stolen. Two things can be done about such situations: The company might be forced to return the overcharges to its customers. This procedure, however, is not practical; it is very difficult legally; it is grievous and wasteful. San Francisco's recent experience in making refunds to gas customers is a good illustration. The other method is to prevent the occurrence of the condition by requiring all corporations to make detailed reports for the benefit of the public and the public commissions.

Fortunately pictures like the above are not so common today, although many local and state public commissions are still violent offenders. These commissions might take a page from the Federal Government in its control of railroads through the use of frequent, accurate and detailed reports. The average, or so-called "special," investigation is not a preventive measure; at best it is an antiquated remedy that has well-earned a resting place among our governmental antiques.

(e) Like various public utility commissions the Federal Trade Commission is compelled to waste much effort and money by making special investigations to disclose the actual state of affairs when consolidations and mergers begin to take on the color of undesirable combinations in restraint of trade. Much waste could be avoided, many of its functions facilitated, if the commission had available complete detailed reports on the internal affairs of every corporation in the country. Undesirable combinations could be prevented during their formative period, rather than dissolved later, which is often a most difficult and costly task.

(f) Another qualification remains to made to the general statement that the stronger the competition the more efficient the production and the better the distribution of wealth. Competition, like man, has excesses. If too strong, competitors sometimes employ unfair methods; they will even sell below the costs of production,

then we have "cut-throat competition." A price war is waged—as happens every so often in the oil industry at Southern California—with injury to all participators, and eventually some or all of the cost of the battles may be passed on or shifted to consumers. In these wars the company with the long purse generally comes out on top, while the small fellow is hard put to escape with his skin; he may jump out when the fray begins—if he can—and slip back into business when it is over—if he can. By such maneuvers the small competitor may indeed sometimes save his very skin, but he is certain at least to have his hair badly singed as he moves in and out among the blazes.

For some time we took little note of these things and considered them as merely temporary conditions, on the assumption that in the long run prices would settle themselves at or near the costs of production. Of late, however, research in business has unearthed several glaring exceptions to the general theory. Some industries have been chronic losers for long periods while others have been exceptionally profitable. One man, finding himself caught in a losing field, made an apt reply upon being assured by an economist that everything would turn out well in the long run. He said, "That may be true, but I'll be dead in the long run too."

Quite contrary from encouraging these extremes of competition, it is maintained by the backers of the proposed law, the new legislation would exercise a salutary effect. Complete detailed reports of the bad fortunes held by the industry would serve as a deterring influence on those who contemplate entering the field. Some of those already caught in the fray would drop out and relieve the tension, if the most victorious carried banners showing that even for winners the fight is not very profitable.

Again it is true that some under-selling is done simply because, for the time being at least, a few competitors do not know what their actual costs of production are. Any first-rate business man will tell you that ignorant competition is a deadly menace. There would not be so much of this if every incorporated producer were forced to calculate his costs accurately for the information of the public.

Finally, the business fraternity despises the habit of selling below costs, because it is well acquainted with its consequences, and always tends to ostracize the "cut-throat" competitor. If only the facts were made known, the producer who started a price war would find that he had to fight not only his competitors, but also the general business and public opinion as well. These prospects are not so bright; they are likely to force the would-be underseller to reconsider his plans—and perhaps abandon them.

For these reasons it is believed that the proposed law would encourage healthy competition and at the same time prevent it from reaching the stages of excess.

(g) One cannot emphasize too strongly the importance of the process of placing funds of savings at the disposal of productive enterprise. It is the investing of money which determines not only what shall be produced, but also who shall manage the production. The wisdom exercised in making investments is the very foundation upon which our economic welfare rests. That we should confine our efforts to those tasks at which we are most efficient is an obvious truth. This is the principle which underlies the division of labor, the splitting of a job into several specialized operations, and it was through application of this method that rapid strides in the arts of production were made during the last century. Do whatever you can do best, we are told, but in order to apply the principle one must learn first that at which he is most proficient. And this is to be learned only from records of trial performances. Therefore, the reformer argues, complete reliable corporate information would be an invaluable guide in applying our funds, and hence the efforts which they purchase, where they are

most effective. If this dictum be followed there will be more goods or less work, or both, and everyone will be all the better off for the change. To be sure we shall have to import those things which we ceased to produce, because we learned we could produce other things more efficiently, but herein lies our gain. The new goods we are producing will more than suffice to pay for our new imports, and it is the surplus left after the imports have been paid for that measures the gain we have made by confining our efforts to those tasks at which we are best.

The last step in this particular argument is to prove that the productive energy of our country would be more likely to confine its course to the channels of greatest efficiency if the public were furnished with complete details of corporate affairs. This is a simple matter. The most efficient work is also the most profitable; and investors tend to destroy the less profitable industries and enterprises, and encourage the more profitable, by transferring their investments from the former to the latter where they will yield more; therefore if every investor knew . . . ., etc. While in the main true, one must recall that this argument begs the question in the major premise, for there are many exceptions to the statement that the most productive industries or enterprises are also the most profitable to their investors.

The truth of these statements, as far as they go, cannot be gainsaid. But they are not the whole truth. Against this advantage must be set two classes of qualifications. One class is composed of the objections to further division of labor; the other pertains to the disadvantages of free trading between countries. To mention only the main points, it can be said that an extension of the division of labor, or specialization, brings in its train greater dependence upon foreign sources of supplies from which there is danger of being severed during times of war. This factor is difficult to appraise. The free traders and old Democrats tell us it is not worth considering, but we all know otherwise; it is one of those things we cannot get away from although we may deny them. We know, for example, that England's position in this regard is quite precarious. A majority of her population, it is said, would die of starvation within six months if she were cut off from foreign supplies of foodstuffs. But how is this danger to be valued and offset against the great gains England reaps by confining her energy to manufacturing rather than agriculture? Your guess is as good as any other.

The other objections pertain directly to the division of labor in its immediate effects. It is maintained that specialization causes work to become more tiresome and monotonous, the worker never has the pleasure of beholding an article produced solely by his own efforts, and he becomes a mere cog in the immense wheels of production which confuse and lose him so that he is unable to distinguish his own contribution to the world. Thus men are transformed into mere machines with silent voices and deadened spirits as industry proceeds through greater and greater specialization to smother individualism, and with all the happiness of its workers.

Yet, despite these objections, the advances in the division of labor must be assigned much credit for our progress in attaining higher and higher standards of living. And most men who concern themselves with these questions believe the good store has not been exhausted. Perhaps these men—and economists in general—are wrong in their fundamental assumption that as higher standards of living are attained, as we acquire more goods and leisure, we are happier—still this is no final tribunal to sit in judgment on their philosophy. But if they are right the proposed legislation must be accorded another point in its favor.

(h) Elimination of the guesswork from investing, or reduction of the elements of speculation, it is urged, is an important

advantage to be gained from the proposed law. Two questions present themselves: Would the new rule reduce the speculative character of investments? And, if so, what would be the advantage?

As to the first question it is stated dogmatically that speculation is bred by mystery, thrives on rumor, and vanishes when the illuminating facts are made known. Indeed the very essence of all gambling and games of chance is simply the presence of a significant but unknown element. To destroy speculation just turn on the floodlights of detailed fact.

Certainly this is a beautiful dogma, if there ever were such. A fine convincing theory, this, but how does it square up with the facts? The answer to this query is not reassuring, in the light of another question: Since speculation is fundamentally competitive betting on unknown future events, how are the lights of detailed fact to be switched on? The illuminating facts themselves are not created until the events occur. Evidently a bit of magic is necessary here, for the theory calls for making known the unknown. Wonderful theory!

So it goes with that most interesting and clever thing called logic. It may be used to make argument progressive or it may be employed to impede all progress. The ardent reformer propones an exaggerated but logical theory, then his opponent proceeds to smash the theory with equally sound logic, and the listener gets from the debate—well, nothing at all unless it be entertainment.

Let us disentangle ourselves from the alluring tentacles of logic and make inquiry as to the actual facts of the case which are hidden by argument. Would the proposed law reduce speculation? It would. Although no one can forecast with exactitude the future of any business enterprise, it remains true that prophecies can be made, of future earnings, which so closely approximate actual results that for investment purposes they are quite dependable. The accuracy of these guesses depends upon a variety of factors including the violence of fluctuations inherent in the industry, the length of the period for which the forecast is made, the completeness of the data from which the estimate is derived, and the personal equation of the prophet. It will be noted that certain data are the basis of the forecast. These data are factors related to the probable course of general business conditions, factors pertaining to the industry in question, and factors relating to the individual enterprise for which the forecast is being made. All are important in their bearing on the problem. The course of general business conditions—cyclical fluctuations—and their effects must be considered, and the general facts relating to the industry as a whole may not be overlooked, if one is to make an accurate forecast. But most important of all, in fact the fundamental basis for any forecast, is the record of the particular corporation. Records of past performances indicate the trends of profits, and a detailed picture of the corporation's present condition may make it clear whether there be anything among its affairs that is likely to deflect future earnings from their course or trend. These are the raw materials from which forecasts are constructed; the things without which not even a beginning may be made.

In short we must rely upon records of the past, and pictures of the present, as our chief guide as to what the future may hold. Of course they are not exactly indicative—nothing is—but they are helpful. From them reasonably accurate forecasts are made; without them the investor faces an uncharted sea of darkness. He is left, ignorant and helpless, to play blind-man's-buff and cast his savings perchance into a lucky pot. Where is the man who can evaluate a share of stock, when the corporation surrounds itself with complete secrecy, and refuses to do so much as circulate an operating statement and balance-sheet? Although he has not yet appeared, there are thousands of men, eager to gamble, who will stake their savings on an

attempt to perform the magic. It's both peculiar and sad.

By this time it is obvious that while the proposed law would not eliminate speculation, it would most certainly reduce the speculative element of investment. Now arises the second question: Is it desirable to reduce speculation?

In a final analysis all that is said in favor of so-called speculation, simmers down to the fact that it is desirable to maintain at all times an open market and fair price for securities. The open market makes assets liquid and provides a ready means of distributing risk. The fair price prevents the catastrophe of either forced sales or ignorant sales at unreasonably low prices. But on a moment's reflection it will be seen that ready markets and fair prices do not arise from speculation as such; they are provided rather by a large volume of investment transactions. In fact the presence of a high degree of speculation tends to divert prices either far above or far below their fair level. Reduce the speculative element and of necessity a spontaneous reduction occurs in the violence of price fluctuations.

Some men have sought to dismiss another important point in this connection by saying that what one speculator loses another gains, so that society in general is not affected by the game. This statement is merely another clever screen thrown over the real situation. As a matter of fact society is affected adversely by the game. In the first place there is a lot of wasted energy consumed in carrying out the speculative transactions. The services of many men are required to operate the game and these men must be fed, clothed, sheltered, and entertained by the efforts of other members of society. In the second place, the redistribution of wealth that results as one speculator gains and another loses is quite undesirable. The losses are generally incurred by those least able to afford them. It is the small speculator who loses his little pile of private savings when he attempts to beat a game about which he knows approximately nothing. What he loses is gain to the wealthy professional speculator, but in the transfer a net loss occurs. The small fund was capable of bringing much more happiness to the small investor than to the rich man who won it. There is no need to explain this by describing the principle of diminishing utility. Let it suffice to ask whether there has not been a net loss to society when hundreds of families are rendered penniless in order to enrich still further a few men who are already wealthy?

It is not an unkind act to protect the small investor against his own follies by diminishing his opportunities to lose what little he may have been able to save. This can be done by reducing the speculative element of corporate securities.

(i) Perhaps the most remarkable recent tendency in corporation finance is the insertion of an ever-widening gulf between the management and the so-called ownership. For some time we have been accustomed to corporation directors and executives who own but little or none of the stock of the corporations they manage. Yet not much fear has arisen because these men were the elected representatives of the stockholders. They could not become lax or inefficient except at the peril of losing their positions at the next annual meeting of stockholders. They had to manage the corporate affairs in the best interest of stockholders and produce profits or lose their jobs. This was a powerful incentive. A small executive salary of ten thousand dollars a year means an income equivalent to the interest on a quarter million dollars of Liberty Bonds—something worth protecting against loss.

But larger and larger doses of an alarming factor are being injected into the situation. In many cases the directors and executives are no longer the elected representatives of those who have made the capital contributions to the enterprise! This condition is brought about by various methods. One system is to raise most of the funds required by the issuance of bonds

and preferred stocks which carry no voting rights. Another device is to scatter the holdings of common stock, which generally possess voting power, widely over the country in small units. This method is surprisingly effective. Once established in control, the managers of a corporation whose voting stock is widely held, may sell their own holdings on the open market and yet maintain their positions almost indefinitely—even despite remarkable showings of incompetence—by using the "proxy system." This system is very simple. Just prior to the date set for the annual meeting of stockholders to elect directors for the coming year, those in control mail a letter—at the corporation's expense—to each holder of voting stock. The letter may be nothing but vague ballyhoo or it may be an intelligent survey of the corporation's progress and prospects, but in either event there will be enclosed a proxy which the stockholder is urged to sign and return. The proxy is a little legal document giving some designated person—the sender of the proxy of course designates himself—the power to vote in whatever way he chooses on behalf of the absent stockholder at the annual meeting. As a general rule stockholders comply with the request and return a signed proxy, although sometimes it happens that in event the letter was not written carefully, difficulty is experienced in collecting enough proxies to constitute a quorum—this latter being the minimum stock representation required to legalize the actions taken at the meeting. Fortified with these proxies the directors appear at the meeting, over-ride the objections of any little rebellious stockholders who may have taken the trouble to attend the meeting in person, and go through the formalities of approving all their acts for the past year and reelecting themselves to the directorate for the coming term.

The third method reaches the absolute limit. It goes the whole way toward protecting the management from any dictation whatever on the part of those who have contributed the capital. Reference is made to the non-voting common stock device. It occurred very frequently before the year 1926 that upon the reorganization of a large corporation two classes of common stock were issued. One class designated "Class A" was made non-voting and issued in large quantities to the public. All voting power was concentrated in the few shares of "Class B" stock which were issued for a nominal price, not to the public, but to the investment bankers who managed the reorganization and marketed the other securities of the corporation. Several corporations of this type exist today although it is rare now for new ones to be created because Professor W. Z. Ripley at Harvard exposed the dangers of the device and led a vigorous attack against it, and Mr. A. A. Berle, Jr., published an article which made it clear that there was considerable question as to the legality of the system.

Thus it occurs in one way or another that stockholders are divorced from their control. The dangers inherent in this situation may be made clear by asking the reader whether he would care to place his private estate into the hands of a group of men, give them absolute control, retain no say whatever except in event of downright fraud, allow them to fix their own salaries, forego the power of discharge, permit them to determine what portion of the net earnings you could withdraw, and be content without even so much as a periodic report on the progress of affairs? The simple truth is that one could name a goodly number of large corporations the stockholders of which are doing just this thing.

Under such circumstances it is a high tribute to the efficiency and honesty of corporate managers that stockholders so often find their investments profitable. Nevertheless mismanagement is not an uncommon occurrence and dangers are always imminent and ordinary prudence dictates that whatever safeguards are available should be thrown around the situa-

tion. Thus publicity of corporate affairs may perform another function. Foreknowledge that detailed reports of their deeds were to be published would be a strong incentive for managers to do their best for stockholders and fulfill the work expected of trustees. Few men care to stand up against the condemnation of intelligent public opinion; few men live today who would not modify their methods of work and living if all their acts were to be made a matter of public record.

Rigid publicity not only has a salutary effect, but also the ability to signal approaching dangers. Not infrequently heavy losses are averted because warnings were sounded in advance by detailed audits which fell into expert hands for interpretation. The proposers of the new law do not expect, of course, that the ordinary stockholder could or would make an intelligent study of balance-sheets and operating statements. These analyses of the reports would be made by bankers and experts who would offer their conclusions through newspapers and magazines.

(j) Another important advantage of publicity is that it affords a basis for the scientific comparison of the different items of expenses for various competitors. Averages or norms for an industry are calculated thus affording individual producers a base with which to compare their costs. The causes of any wide divergences from normal are investigated and very often considerable savings are effected. The importance of this is recognized today by trade associations and trade journals which undertake so far as possible to publish normal cost figures for each industry. The raw data for these purposes are collected from the records of all producers who can be induced to furnish them. Obviously more dependable and representative figures would be available, and consequently greater savings be effected through their use, if all producers, rather than a few, were contributing their detailed costs for the welfare of the industry.

(k) The fact is well known that the wealth of a rich man is generally overestimated by other members of his community. Likewise the employees of a corporation often hold the opinion that the company is reaping excess profits as a result of their labor. This suspicion breeds discontent. Then the workers who feel that they are not receiving a fair share of the corporate income, lose their cooperative spirit and their production dwindles. In acute cases they may strike.

Regardless of whether these fears and suspicions are justified it is better that the facts be made known. Suspicion, like speculation, thrives on secrecy. If the employees are entitled to higher wages, public opinion will bring them about and fair treatment will be secured, provided detailed reports of the corporation's affairs are available for public inspection. If the suspicion is founded on fallacious rumors of large profits, then it is better that accurate reports be published to correct the erroneous impression among employees and thus secure their co-operation for the welfare of the company. The workman who believes himself to be a victim of unfair treatment is unhappy, wasteful, and inefficient while he continues to work. If he strikes, still greater waste and hardship follow. For the prevention of labor troubles open dealing is the first principle.

In this connection it is worth noting that another large amount of suspicion and fear of the most undesirable character would be destroyed by some rigid publicity requirements. The general public, and stockholders especially, often suspect all sorts of bad conditions such as mismanagement, monopoly, unfair competition, and even outright fraud, on the part of those corporations who keep their affairs a closed book. It seems to be a common trait of human nature to always suspect the worst when nothing definite can be learned. Then too the sparks of suspicion are often fanned into flames by the alarming proclamations of ardent reformers who are led on by their zeal and emotionalism to make promiscuous accusations.

From the standpoint of labor, however, the most important advantage of the proposed law is its power to reduce unemployment. Anything that functions as a damper on chaotic competition and reckless speculation in industry may be counted as a Godsend to those who are dependent upon continuous employment for their welfare. Unemployment is perhaps the greatest black page in American prosperity at the present time, and any proposal that promises to mitigate the fluctuations of industry deserves more than a passing notice.

(l) It is believed that the foregoing discussion covers the most important advantages of the proposed legislation. Under this heading very brief mention is made of four other supposed advantages. And finally consideration must be given to the factor of fraud prevention upon which the reformer places great emphasis as a most significant advantage.

At least five minor factors are worthy of mention if for no other reason than the fact that at various times they have been stressed in debate on the problem. First, it is said that investment bankers would be prevented from overcharging for the underwriting of the securities of the corporations they control. In addition to this the present investigation by the Federal Trade Commission into the affairs of banker-controlled public utilities is revealing much abuse. The controlled companies are forced to contract with other corporations to perform their engineering and management function. Excessive charges for these services are sometimes made, with the result that the bankers who are the sole stockholders of the service corporations are able to milk profits from the public utilities they control. Second, it would check unfair treatment of one or another of the numerous adverse interests that spring up among the stockholders when several classes of stocks have been issued. Third, it would prevent stockholders from treating dividends as income when in fact the dividends were paid not from earnings of the corporation, but from capital contributions to the enterprise; or, stated another way, it would prevent spending from capital rather than income and thus not disrupt the stockholder's personal budget. These factors, although not of paramount importance, are at least genuine advantages of the proposed law. Not so much can be said for the remaining two factors: Fourth, some writers maintain that the proposed legislation would aid in getting at the fountain head of the impersonal frauds and crimes committed by corporations, acts which go unpunished (excepting payments of fines and damages) because a corporation cannot be imprisoned. No one, however, has succeeded in pointing out just how the new law could be expected to perform this function. Fifth, it is said that stockholders have an inherent right to full information about the enterprises to which they have committed their capital. This contention is founded on two things: the assumption that stockholders are owners of corporations, and the principle of common law that stockholders have the right to inspect, within certain limits, the records of their corporations. We shall not stop to quibble over the "rights" of stockholders for even though the point were established it would possess no practical importance in this industrial age when such phrases as "principles of governmental protection of rights and liberties . . . ." sound like an empty echo from history.

(m) Finally we approach for examination what might be termed the "Big Bertha" of the offense—the argument that produces the greatest roar, the most impressive weapon of all. In order to understand this machine precisely it is necessary to correct a very general misconception. We have all been taught from childhood that stockholders are the owners of a corporation. We hear it all the time, and read it everywhere, with the consequence that we come to believe it thoroughly. The belief is a part of our stock-in-trade of unquestionable knowledge and fact. It is

perhaps too much to hope that this deep-rooted conviction can be removed at a moment's notice, but it should be removed for it stands in the way of an accurate conception of the relationship between stockholders and the corporation. The statement that stockholders are the owners of corporations is true for all practical purposes provided all stockholders would and could act in unison—which often they cannot and will not do—but the statement is not true in any strict legal sense. If taken literally the statement is manifestly fallacious because a corporation is a legal entity, a legal person which can bring suit or be sued like a private individual. A corporation is not property and therefore cannot be owned; it is a legal person in the eyes of the law, and like you yourself, no one has legal title to it—with apologies to the wife! If the statement be taken to mean that stockholders own the corporate assets, rather than the corporation itself, it is still erroneous. The corporation itself is the sole owner of its assets. It continually sells and mortgages them and the stockholders, as such, have no word in the matter. None of the attributes of title to the corporate assets is included among the rights of stockholders.

The relation between a corporation and its stockholders is a contractual one. A share of stock is a contract. The corporation accepts the stockholder's money, property, or services and in return for this consideration grants the stockholder a right to vote, sometimes, in the management of the company, to share in the profits from operations and in the distribution of assets upon dissolution of the corporation. In addition—and this is the important promise—there is in the contract an implied obligation on the part of the corporation to conduct its business affairs in the best interest of the stockholders, so long as this does not conflict with the paramount public interest. In order to function the corporation must have human representatives, so a board of directors is elected and entrusted with the obligation of directing the business in the interest of the stockholders. The directors are thus a special kind of trustee; their position is that of a fiduciary. But unfortunately the obligations of the trustee are sometimes forgotten and this happens:

The directors notice that the corporation's stock is selling on the exchange at, say, 50. It is selling for that price because the stockholders expect it to yield a dividend of, say, four dollars per share. But profits are proving to be greater than expected; in fact the corporation will be able to pay an eight dollar dividend this year. This condition is known, however, only by the directors, and since no information has leaked out the stock continues to sell at 50. So without making the facts known the directors enter the market and buy all the stock available at or near this price. Then a meeting of the board of directors is held and an eight dollar dividend is declared. This news causes the market price of the stock to double. The news is genuine; there has been no discounting in advance. At this point the directors enter the market again, this time to sell at 100 the shares recently purchased at 50 and pocket the proceeds.

Quite contrary to acting in the best interest of stockholders these directors have deliberately taken advantage of the stockholders' ignorance of corporate affairs. They play the game, if they are unscrupulous, with hidden cards and loaded dice. It is so easy and so safe to accumulate money in this way that many directors have been unable to repel the tempter.

The presence of this trickery is indicated whenever an unusually large volume of trading occurs in the stocks of a corporation just prior to a rapid advance of stock price resulting from the announcement of some favorable occurrence which promises large profits, but which by no stretch of the imagination could have been predicted in advance. While not conclusive evidence, this indicates strongly that some anxious bidders saw the cards before they were turned.

Of course there is the common law rule that no trustee may purchase a part of the trust property from a beneficiary without first having given the beneficiary full knowledge of all the conditions relating to the property. Yet it is a practical impossibility to apply this rule of trusts to the transaction described above, so that it remains a very safe, and to some an attractive, method of acquiring a private fortune.

No one knows how prevalent this abuse is today. One may find estimates, but they are based on absolutely no facts at all. The general optimistic belief is that this type of abuse along with others of "high finance" has declined appreciably during the last two decades. Flagrant examples of it, however, are often admitted by the directors, who have profited in this manner, during private conversation with their friends; three such cases have been mentioned to the writer by their perpetrators already this year. Some examples, defying all suppression, even attain the public press in full detail, and it must be true that the vast majority of cases are never detected.

To this condition the excited reformer applies such words as swindle, crime, and fraud. It is believed that a lesser accusation should suffice, for in fact no rule of law has been violated, and the offense is so common as to be almost customary. To some men this act is as natural as lifting their hats to ladies. A great many highly respected citizens have acquired fortunes in exactly this manner. Then, too, as one man said, "Why insult your friends?" It is better referred to as a very bad habit. No thinking man with a dash of public spirit in his make-up would ever praise the practice. Some men who are guilty of the habit, but quite strict in their ethics in general, try to excuse themselves by the most flimsy but interesting phrases. One says, "A man's a fool if he doesn't take advantage of such opportunities." Another excuses himself with, "Why not, when everyone else does?", which, of course, is far from true. A third maintains that these gains are merely extra compensation. Still another holds that, "We made the extra profits, why not take them?"

The fact which needs to be recognized is this: While these men have not in fact violated any law or committed a crime, their acts actually have the same effect on the body of stockholders as an outright robbery of corporate funds. When this information is learned public opinion will go a long way toward stamping out a detestable habit.

The reformer maintains that this practice would be eradicated by operation of the proposed law. All secrecy, it is said, would be done away with, there would be no chance for market prices and intrinsic values to swing apart, no opportunity to exercise the habit. Every good citizen wishes this were true, but unfortunately it is not the case. In order to accomplish this end the law would have to require accurate detailed reports at least weekly, and this is impracticable. Thus the weapon which is most impressive, is, unfortunately, also the least effective.

Another form of trickery, however, very similar to the one outlined, would be obstructed by the proposed law. This consists of "rigging" the market to fleece the ignorant stockholders by the issuance of false reports to drive stock prices up or down in accordance with the personal desires of the directors and executives in their stock market operations. Perhaps this system deserves the name of fraud for it consists of deliberate planning by the directors to acquire the interest of the stockholders which they are supposed to protect.

This scheme, however, is much less common than the one outlined above, for it is both more dangerous and troublesome. It could be precluded if the proposed law made directors personally liable for the issuance of falsified reports.

(The concluding portion of Mr. Robbins' paper will appear in the September issue of the REVIEW.*)*

REALIZED INCOME

E. A. Heilman

The most widely enunciated principle of income determination is that income is realized as the result of the sale of commodities or services. This principle has found general acceptance in accounting literature and in business and legal practice a number of accounting writers go so far as to state positively that this is the sole principle of income determination.

Now income tax practice and cost accounting have long since convinced most of us, if we were not previously converted to that viewpoint, that the concepts of "income" and "cost" are two of the most difficult in the whole field of economics and accounting to define in anything like precise terms. Income accrues to an individual or a business in something like a continuous stream and the task to which accounting has set itself, that of breaking down this stream into periodic segments, is attended with more difficulties than most of us like to admit to our students. With the large number of incomplete transactions which carry over from one such period to the next, any answer which we may give to the question of how this income may be equitably divided between periods is bound to be largely a tentative one, subject to revision in the light of future developments.

There can be no question that many incomes are earned as the result of the joint operations of two different fiscal periods, since only part of the services for which the final price is paid by the purchaser are performed in each period and part of the costs of furnishing these services falls into each. This leaves open three possible treatments of the costs and incomes concerned. First, the costs of each period may be considered as incurred in earning only the incomes received during that period; second, some of the costs of the first period may be deferred to the period in which the total income is received; third, the total income may be divided between the two periods on some reasonable basis.

Actually each of these methods has found acceptance in some business but the more usual accounting treatments seldom apportion the income, but elect to defer production costs to the period of income receipt but to charge commercial expenses against the income of the period in which they arise. With the wide diversity we find in different enterprises in methods of sale, types of sales contract, methods of production, and in collection methods it would seem reasonable to assume that no single test of income realization would meet all situations with the same degree of satisfaction and I hope to show in this paper that other methods of apportioning income between periods should be used and that there is good conservative ground for varying the test of income with the differing circumstances with which accounting has to deal. Accounting texts sometimes admit a number of situations which may need exceptional treatment but the number and importance of these situations is seldom accented and usually there is no open admission that another test of income has been applied, and only two or three authors have directly discussed and weighed other general tests which might be employed.

It is my purpose to raise this question and point out a wider range of business conditions and situations in which I think the sale test must be modified or other more adequate tests applied if we wish to arrive at the best measure of periodic profits or of changes in economic position.

In the case of the sale of merchandise the chain of events leading up to the receipt of income begins with the purchase of the merchandise itself; in the sale of a manufactured commodity it leads back to

the purchase of the raw material. In fact, we might go so far as to say that the chain of services leads back still farther, to the establishment of the business itself, which was the first step in a long series of efforts and expenditures producing a continuous series of incomes during the life history of the enterprise. Through cost allocations we spread these costs over the fiscal periods and thus obtain something like an equitable relation between incomes and cost. From the time of purchase to the time of settlement of the sale a considerable number of steps are taken all of which contribute to the final result.

Generally speaking, therefore, it is illogical to assign to any one step in this whole series the whole credit for having earned the resulting income. In particular situations we may be convinced that the main factor in earning a certain income was splendid sales work, excellent purchasing, a brilliant discovery, or some increased productive efficiency, but in the usual run of accounting record we do not attempt to measure separately the earnings attributable to each step in the business process. Mr. Paton has specifically raised the question whether it would be more logical to accrue income along with costs but so far this viewpoint has found acceptance in practice only in the case of long-term construction contracts. Mr. Hatfield has also suggested situations where the credit for profit must be given to other transactions than the sale. It would seem peculiar therefore to contend that the obtaining of an order and shipment of the goods *alone* is responsible for the income earned. This would be lending too much accounting support to the feeling of salesmen and sales departments that they are the only income producing units of the organization and are supporting the payrolls of the other departments and would be exalting unduly the importance of mere order takers in the economic structure of the business.

The defense of the sale as a test of income realized lies rather in the fact that it is the last vital step in the longer business process which indicates that the task is now completed and the income fully earned. In the trading field and in a large percentage of that of production as well goods are bought or produced in anticipation of sales and are finally passed on to the customer after some sales effort. Whether production or sale is the more important or costly function of the business may depend upon the nature of the business operations but income is not assured until sale is assured and the sale constitutes the last important step in the process, hence conservative profit determination cannot safely precede that point. The income figure can at that point be considered definitely ascertainable, the certainty of final receipt is high, a legal cause of action against outsiders has arisen, and it is now possible to include the amount in the liquid funds which will shortly be available for expenditure or distribution to stockholders, all of which are highly desirable characteristics of good income.

It is true the business process may not yet be entirely complete and there are still a number of services which have to be furnished, involving some cost to the concern, such as carrying costs, collection expense, bookkeeping, but these are not usually large nor important and can be reduced to estimates deducted in calculating the profit. Allowances, rebates, returns, discounts, transportation may still have to be dealt with, some of which are estimated, others neglected entirely until they have to be met.

These instances will serve to remind us that "completion of the business services" in this connection can mean only "substantial completion" and the accountant may therefore be justified in asking whether the credit sale is not too early a stage in the process for proper profit taking. Accountants and business men are now quite generally agreed it is not, though in the earlier years of accounting it was not considered conservative nor safe because of the uncertainty of collection. Provisions for

uncollectibles and other estimated deductions from sales income are now considered amply safe. This may be accomplished in two different ways—by postponing the credit for that portion of the income which might be fairly attributable to these further services to be rendered, or by making deduction of liberal allowances for the losses or costs still to be incurred. Accounting practice in general is following the second method by setting up reserves and allowances for bad accounts, discounts, and rebates.

Those concerns which sell subject to a free service period, as do some auto dealers and vendors of oil heating plants, will make proper allowance for the further costs or losses to be borne subsequent to sale or even to collection, or possibly withhold the credit for that part of the price which is for service costs. Where the deduction for estimated service costs is made on the basis of regular selling prices of the service department, as is sometimes done by auto dealers, the service department later billing the sales department at regular prices, this amounts to taking the profit on the service work as the service is given rather than at the time of car sale. It is a recognition of the fact that the service is a separate factor in the sale price.

From the standpoint of the exactness with which income can be measured and the assurance of results the sale has proved reasonably satisfactory. Where, however, realization values on accounts receivable are uncertain and collection costs apt to be high the credit sale is distinctly inferior to the cash basis. This has been the major factor in the use of the cash basis for professional men, which has had income tax approval for some time. (It might be interesting to note here that the latest English income tax regulations seem to require professional men to report income on a fees basis and not cash, contrary to previous English practice and our own.) The cash basis also has its application in enterprises where accounting and business methods are unstandardized, cash in hand there constituting the most reasonable approximation of income.

The use of the cash or collection basis in the installment business also results partly from this higher degree of uncertainty as to collections, and collection and repossession costs. The collection basis may also be urged because it is evident that in the installment field the business process includes a longer credit step and is therefore by no means so "substantially complete" as in the usual credit sale. The handling of credits probably runs over a longer period than the whole transaction period of the business. Since installment selling in many lines has reached the point of complete segregation of trading operations from financing and collections in separate companies, we have rather conclusive evidence that the credit function in this case at least is sufficiently important to withhold income credits until some period of collection.

It should be pointed out, in connection with any discussion of the cash basis, that even the receipt of cash does not necessarily signify the end of business services to be furnished or costs to be incurred. A goodly number of the deductions previously mentioned would still have to be made, if accurate income figures are to be arrived at.

This requirement of exactness of computation is only a relative matter and one accountants no longer demand on the other side of the income account, in cost computations. It might well be said that it is by no means a necessary requirement and only to be insisted upon "other things being equal." It is always highly desirable to have exact amounts with which to deal but the older objections to estimates in the accounts have largely disappeared in the face of cost accounting necessities and the accountant who is unwilling to make cost or budget estimates is distinctly behind the march of his profession. He may still have his constitutional dislike for estimates but it has been seriously impaired by amendments.

Other advantages of the sale test are that it uses a regularly recurring business transaction to which to attach the income entry, it is simple in operation and comparatively uniform for the same establishment as well as for a fairly wide range of business. It gives us an income figure which is usually of importance in deciding dividend and profit investment policies. It is at least an income figure which represents what has already passed into the cash account or will shortly reach that destination. It of course cannot give any measure of the amount of that profit still on hand in liquid form, but no other income figure is apt to give us any such result. Some other possible tests would credit income, a goodly portion of which might not be available for this purpose for long periods.

Another strong factor in support of the sale is its superior legal standing. Of all possible tests it probably enjoys the highest legal recognition. The passing of title is a stage which the courts accept as evidence of the completed transaction and is the decisive element in most cases brought forward for court adjudication. For income tax purposes it is therefore extremely useful. It must be accented however that the income tax treatment is quite as largely the result of current accounting practice as of legal procedure and that new "established practices of the trade" might well outweigh the legal aspect. It is nevertheless true that accounting practice has not been very meticulous in its observation of the matter of passing of title but has more generally specialized on the fact of shipment as the indication that the sale transaction is complete, though in certain types of sales contracts title undoubtedly passes at some earlier point. The legal distinction between ascertained and unascertained goods is seldom made use of in accounting discussion of this point. Probably with the wide diversity in methods of retaining or passing title in installment sales agreements title has become of less accounting significance.

In spite of these distinct advantages of the sale test it must be emphasized that there is still a wide portion of business in which conditions differ materially from those just assumed. It is evident that in those businesses which enter into sales contracts or take orders for goods in advance of production we have a situation somewhat different from the typical one outlined so far, and there is considerable room for doubt as to the exact stage at which income should be credited. The previous statement that the sale is the last vital step in the process no longer holds or it has to be modified since we are dealing with a series of steps all going to make up a completed sale. We therefore no longer have a single sale test. Let us suggest the following as some of the significant stages of the process:

1. Taking the order or signing the contract.
2. Purchase of the raw materials or placing a hedge to cover.
3. A longer or shorter production process.
4. Completion.
5. Segregation of the goods for the consignee.
6. Receipt by consignee.
7. Collection.

I am sure that the lack of uniformity between different types of business is here so complete that for each stage enumerated an industry or a number of companies might be found which use that particular stage for making the transfer to the income account.

It might seem absurd to calculate profits on receipt of a signed sales order before any steps toward production had been taken, though a broker, whose responsibility ceases at that point, might do so even though the company does not credit his commission until actual acceptance of the goods by the purchaser. In the milling industry where binding sales contracts are entered into in advance of production and where sales are immediately covered in the wheat market by a purchase or a hedge,

there is some considerable reason for defending an income procedure which takes credit for the profit on such covered sales in advance of filling the order. The amount earned on the sale can be considered reasonably certain, since we have a legally binding contract which is usually enforced. There will of course be losses on cancelled contracts but in normal times these are not so numerous as bad accounts. At a time like the break in the wheat market in 1920, however, such cancellations may assume the proportions of a catastrophe. Millions were lost by milling companies at that time. A reasonable reserve provision will usually take care of this loss; the costs of milling wheat are pretty definitely known and can similarly be provided for. Some milling companies have adopted this procedure, but from the standpoint of "substantial completion of the business process" such a method would be subject to criticism, since the real function of the milling company has not yet been performed. It might be justifiable to take credit for a portion of the profits at this time since substantial services have already been performed on the contract but it is scarcely timely to credit the whole income, no matter what costs are deducted.

On the other hand production as a test of income realized has much in its favor in those cases where there is no longer any question of having to sell. Where a definite order is on hand and the goods are ready for delivery only the relatively unimportant step of delivery to the carrier remains to convert them into receivables, and it seems unnecessarily conservative to insist on the last letter of the law. A distinction between stock goods and special might be made and the justice admitted of considering one unsold until definitely segregated and set aside for the particular order, since legal title depends on these factors. Special goods however would not need to wait for this procedure. A more important matter from the accounting standpoint and one more frequently considered is the practice of the business in insisting on carrying out sales contracts and the number of cancellations which are permitted. Again reasonable provisions for such losses of profit may be made. Substantial performance is certainly present in these transactions to almost as high a degree as in the usual credit sale. A somewhat stronger case can be made for those companies whose output is contracted for in total at either a fixed price or market. Evidently the degree of certainty of result is very high and the business process of the company ceases with production and shipment. Finished goods held for shipping orders can certainly be listed at selling prices, since the only uncertainty is the exact length of time which may elapse before shipment.

In the contracting firm this procedure has been carried a step farther, at least in the case of long-term contracts, in that profit is regularly taken at the end of the fiscal period on unfinished work on the basis of percentage of completion. The impelling reason for this method is of course that in no other way can the company arrive at anything like an equitable distribution of its income between periods. It appears manifestly illogical to withhold all profit on a two year contract until time of completion but the method adopted involves the acceptance of the principle that income accrues on every $1 of expenditure on the contract. This principle finds practically no advocacy among accountants and even in this connection is seldom definitely admitted. Some good point attaches to the argument that profit depends directly on satisfactory completion of the contract and that in case of failure to complete, losses rather than earnings would result. Also final inspection may disclose deductions to be made for unsatisfactory work. But these hazards are not usually considered sufficiently important to invalidate the procedure adopted. The method is even more applicable to cost plus contracts where profits are calculated directly in connection with all work done. A rather high degree of estimate is required to obtain the

result, more so possibly than in the case of manufacturing, but the need is so plain that practice has usually condoned this fault.

In the case of contracting companies which carry on a considerable number of projects each year, some of which are incomplete at the end of the year, a fair showing of income may be made by including only profit on contracts finished. There is therefore not the same necessity for accruing profit on unfinished work and we find in practice that the method is less often used. Such firms approach more nearly the conditions in the manufacturing plant which produces on previous order and the usual cost assumption that unfinished work represents merely costs expended is usually applied. However the arguments given above in favor of percentage of completion apply here with the same degree of validity. Since sale realization follows directly upon completion and a considerable percentage of the whole year's work may be unfinished at statement time, profits on a goodly share of the year's work may be excluded from the income account.

The widespread use of the time of shipment for income credit is based in most cases on the same conservatism which will not take income until results are considered assured and from the standpoint of recording convenience, this is quite desirable. Where uncertainty as to acceptance of the shipment by the customer is present it may be better to postpone the credit until notice of acceptance has been received; especially is this true of warehouse liens or drafts with attached bills of lading where dealers sometimes fail to raise sufficient funds in time to take up the drafts.

There is another type of sales situation which needs further discussion. I have defended the sale on the ground that it most frequently is the last vital step in the business process. There are however a goodly number of industries and business situations in which the sale is not a very vital step. Wherever sale follows quite as a matter of course or presents no problem to the management it also becomes of negligible importance in income determination. I have already cited the case of the company which has its output contracted for in advance, which is somewhat akin to this condition. Farming represents possibly the best example, for the farmer is a producer and not a merchant (at least until the passage of Mr. Hoover's coming farm relief measures!), and a grain market or an elevator stands ready to take his entire output off his hands when delivered. The farm price method of inventory has long been recognized and means of course that production is the earning-point in income calculations.

A number of other extractive industries are in the same position since a general market stands ready to take their product at the going price and the company has merely to make its decision as to when and where it will market its commodity to convert inventory into sale. Theirs is purely a production problem and it is reasonable to calculate profit on ore inventories. There is of course the problem of fluctuations of market prices to be considered, and the exactness with which final income to be received can be calculated may be questioned. Any income figure arrived at might rather be one "realizable at the present time" rather than one realized at the actual time of delivery to the market. If the industry elects to hold its goods for higher prices it is to that extent speculating on the market and thereby has a speculative profit or loss to deal with in addition to the profit on production.

Another situation in which the sale is quite negligible as in the case of holding marketable securities. Value increases in the security account are convertible almost immediately into cash and this increase is much more readily realizable in cost than the profit on credit sales. A distinction has been made between owner-investor and dealers in securities. The investor is interested primarily in the annual return to be derived from his investments

and in security of his principal, so that market fluctuations do not greatly affect his investment policy. Over longer periods, however, he will need to revalue his capital investment and is always interested in the market situation.

The dealer in securities purchases partly with the idea of making a profit on a speculative market and will convert his purchase into cash when he attains this profit. His financial position and his speculative profits cannot be determined until unsold securities are inventoried at market. A statement of profits in terms of completed sales *only* would give an entirely inadequate picture of his income. Accountants have always agreed to his inventorying at market where that is lower than cost but do not always countenance a higher valuation. The result is the same dual standard which has always obtained for merchandise inventories, losses being determined by either sale or market price, profits only by sale. In the case of the security dealer this is particularly objectionable since it results in an altogether distorted view of his profits where he holds both securities which have risen in value and some which have fallen. Income tax authorities have recognized this fact and permitted market valuations.

The same position should be taken for dealers in the other more speculative markets. Any reasonable statement of their position or profits would have to inventory all open trades and purchases at market. In some of the option markets a system of daily or weekly cash settlements converts such profits and losses into cash receipts and disbursements but the profit or loss is just as real whether this is done or not. These profits or losses are inherent in the particular trading situation and cannot be ignored without distorting both the statement of financial position and the profits. Whatever income is involved is highly realizable, just as available as accounts receivable, and is a regular source of loss or gain.

The refusal of income tax authorities to extend the privilege of inventory to the investor in securities may be best from a tax standpoint but has frequently led to periods of "profit-taking" or rather "loss-taking" by investors for the sole purpose of meeting income tax requirements, since the only step necessary to convert "unrealized losses" into realized is to sell the security—and possibly immediately repurchase the same issue.

In this connection it is interesting to consider the peculiar position of one type of investment trust and the holder of the trust certificates. The trust is making two kinds of profits for its investors, if successful, a. income from securities and b. profit on rises in value of securities held. These rises in value at the end of a period may have been realized in cash by sale or may still be represented by securities on hand. A complete statement of income for the trust would have to consider such appreciations as well as sales, at least where the investor may withdraw, his investment and his share of the profits, let us say, at will. Some investors have therefore probably withdrawn both their share of profits realized in cash and those not yet validated by sale. Also no statement of the standing of the trust would be significant which did not show market values for securities.

The holder of the certificates of trust is in a still different position. Cash income to him is only dividends paid on the certificates, but he may realize his proportionate share of all gains of the trust by withdrawing. It would seem to me that in both these situations the best statement of income and the best balance sheet would both have to be stated at market.

The discussion of securities has led us into the topic of appreciation, which is to have more ample discussion on this program than I have time for here, but no discussion of tests of income can pass without some reference to that topic. Appreciation of assets other than securities do not possess the element of certainty as to receipt or amount, there is usually no

immediate prospect of realizing in cash or liquid funds, and it is difficult to set up a regular accounting process for recording without departing rather widely from the course of regular transactions. But there can be no doubt, it seems to me, of the importance of this factor for balance sheet purposes, and I do not see how, in the long run, appreciation of an asset like land can be kept off the balance sheet without making it a poorer statement for credit purposes and without distorting income calculations at some point. As an example of the absurd results to which adhering to cost for land may lead us, let me cite the following instance brought to me by a student.

A farmer had purchased 200 acres of Iowa land in 1905 at $100 an acre. During the land boom of 1919 he sold his farm to the student at a price of $200 per acre, realizing a profit of $20,000 on cost; but only $4,000 was paid down. After looking about for a new place to farm he found his neighbors were all demanding $300 per acre and after a month's search he actually repurchased his own farm from this student at $225 per acre, returning the cash payment and paying a $5,000 bonus for his farm. Now current accounting methods would clearly record a profit on the sale of his farm of $20,000 and a new farm purchased for $45,000 at no loss. Evidently this is an absurd version of a transaction in which the only net result was the loss of $5,000 in cash by the farmer and an equivalent gain by the student. Surely here the sale as a sole test of income is inapplicable and some other basis of calculating profits or values would have to be used.

It is not possible in the brief compass of this paper to cover many of the essential details of the problem of income incidence but I believe that I have been able to bring out a few of the more important considerations. I hope I have contributed some more evidence that:

1. While the sale is an adequate test of realized income in a large percentage of business conditions, the one-sided viewpoint that it is the sole income determinant must be denied;

2. That no single test can well satisfy all the varying conditions of production, sale, and credit service which are found in business practice;

3. That there is in fact no high degree of uniformity in the application of the sale test;

4. That in actual practice other tests are quite well recognized and are bound to receive more support;

5. That while the sale need not be refused because it is not the most conservative principle possible, neither can other tests be called unconservative because they are less conservative than the sale; and finally,

6. That proper accounting treatment of the income problem must take cognizance of the differences in business methods and operations and admit new treatments of the problems which may promise to give more accurate accounting and business results.

COST ACCOUNTING IN GREAT BRITAIN

H. S. Noble

The photographer, amateur or professional, who attempts to bring back pictures from another land operates under a number of limitations. Chief among these limitations are three: The exposure which is necessary to develop the details of the picture; the proper focusing of the machine on the subject matter; and finally, deterioration of the pictures, themselves, to use accounting terminology, due to wear and tear and the passing of time. It is suggested that in the present instance each of these factors tends to make dim and indistinct the pictures, which form the subject matter of this paper.

Inadequacy of exposure was due to insufficient time to study all the details that are involved in cost accounting in Great Britain. The competition of the many other items of interest in England's capital city made difficult proper focus. And, finally, the deterioration that inevitably comes as months pass by, the coldness of the shorthand notes and the resumption of old tasks tend to obscure the accuracy of pictures once fairly distinct.

These limitations are enumerated to show the necessity for using qualifying words in the conclusions presented. They indicate the impressionistic character of the descriptions that follow. These impressions may be grouped under three principal heads.

1. Present day cost accounting in Great Britain seems to be a new "story" beginning after the war, rather than a development of the older phases of factory records known as works accounting.

2. A comparison of the content of present day cost accounting theory and practice in Great Britain with that in the United States seems to show more elements of likeness than of difference.

3. The further development of cost accounting in Great Britain seems closely identified with the features of the present industrial situation in that country.

Students of cost accounting are aware of the existence of the factory system and of factory records in Great Britain many years prior to their appearance in the United States. Babbage wrote his book on economy of manufacture long before the United States had begun to act or think industrially. Garcke and Fells "Factory Accounts" was published in 1887, a generation before factory accounting books appeared in this country. In the United States cost accounting seemed to have a mushroom growth. It developed rapidly, spread itself extensively and intensively, only to be discarded and cast overboard in many instances, by managements who felt it to be a burden. And, quite often these managements were correct in their criticism that it was top-heavy, unwieldy and expensive.

It seemed reasonable to expect that the mistakes which entered into the rapid development of cost accounting in the United States might be made evident through a study of the slower development of the science across the water. A comparison of the characteristics manifested through a conservative growth of over forty years in Great Britain should suggest methods of modifying American cost accounting so as to make it more acceptable to factory administrators.

However, the evidence, collected and examined, proved the fallacy of the foregoing hypothesis. The old works accounting systems, which began in the eighties and continued for some thirty years, seem to a large extent neglected by British cost accountants of the present day. Rather is there a tendency to honor and emulate

the accomplishments of cost accountants in this country. Instead of referring to the development of their own works accounting, one constantly meets such expressions as the following:

"Costing has generally been worked out both in the United States and in Germany on a much more scientific and uniform basis than in this country."[1] Again, "In America much greater progress has been made along lines which are suitable for this country, with slight modifications."[2] Still again, "The scientific application of accounts to the ascertaining of the cost of production is one of the great needs of our time. We are not keeping pace with other nations. Take for example the United States."[3] The following quotation is significant, "The general public has a hazy idea that it (meaning Cost Accounting) is some new American invention which installed in a factory will of itself work wonders in the way of making articles more cheaply and generally improve everything."[4] And finally, the seventh edition of Garcke and Fells appearing in 1922, contains this paragraph:

"In 1887, when 'Factory Accounts' first appeared, 'Cost Accounting' was a neglected and non-recognized branch of Accountancy. To-day it is no longer necessary to urge the importance of the systematic and continuous ascertainment of the costs of production, and this advance in appreciation of 'Cost Accounting' has arisen, in the main from the prominence given to more or less empirical systems of 'Costing' brought into operation during the war, not only in connection with the control by the State of a large number of industrial organizations in order to obtain requisites for the carrying on of war, munitions, food-stuffs, and other commodities, but also in connection with Governmental controls in relation to the maximum prices chargeable in the various branches of trade and for wholesale and retail transactions."[5]

Note, please, the use of the term "Cost" rather than "Works" Accounting and the reference to the war as a stimulus for cost activity.

The output, since 1920, of more than a dozen books dealing with factory accounting is also significant. Almost without exception these books are entitled, not Industrial, Works or Factory Accounting, but rather Cost Accounting. And in their content one finds the cost concept predominant. It is the idea of control over factory operation made possible through constant knowledge of costs, that is fundamental in their development.

It may also be noted that the name of the national organization which promotes and sponsors cost accounting in Great Britain puts the word "Cost" ahead of "Works." It is called the Institute of Cost and Works Accountants. This organization is one of four dealing with the record aspects of incorporated companies. The four include The Institute of Chartered Accountants, The Society of Incorporated Accountants and Auditors, The Chartered Institute of Secretaries and The Institute of Cost and Works Accountants. The first two of these four represent the public accountants in Great Britain and are well known to the accountants in the United States. The third represents an association of those interested in the work of incorporated company secretaries, while the last represents the cost accountants.

The Institute of Cost and Works Accountants was organized in 1919 coincident with the forming of the National Association of Cost Accountants in this country. It has many features similar to the National Association of Cost Accountants, such as headquarters in the city of London, with local chapters in London, Liverpool, Manchester, Sheffield, Birmingham, and other centers. It publishes a periodi-

[1] Edward T. Elborne, The Costing Problem (London) Extract from report of committee of commercial efficiency, appointed by Federation of British Industries, September, 1918.

[2] J. M. Scott-Maxwell, Costing and Price Fixing (London, 1923) Introduction.

[3] W. Strachan, Cost of Accounts (London, 1923).

[4] A. Cathles, The Principles of Costing (London, 1923).

[5] Foreword p. 2.

cal giving articles dealing with aspects of cost accounting and news of the chapter activities. Membership in it is not denied to those who are members of any of the three other societies and a considerable number of public accountants are included in its roster. Unlike the National Association of Cost Accountants and like the other three organizations in England, it sets examinations which must be passed as a prerequisite to membership.

So it is that one finds in Great Britain a cost accounting movement that seems to be new rather than an outgrowth of previous works accounting. The acknowledged statements of recent British writers, the discontinuance of the title "Works" and the use of the title "Cost" accounting, and the cost characteristics of the British organization seem to point to the beginning of a new chapter in cost accounting in Great Britain. Like the product of our largest automobile producer, the new model is not a refinement of the old but an entirely new creation from shock absorbers to gas tank.

As in the case of the new Model A Ford, it may now be interesting to examine the anatomy of this new cost accounting and discover whether the elements of the new cost accounting bear out the professions stated above. That brings us to the second impression which is: That the constituent parts of cost accounting theory and practice in Great Britain seem to show more elements of similarity with American cost accounting than of dissimilarity. And it might be added that in many cases of dissimilarity the present trend seems to be toward American cost theory.

Impression number two, just given, is at least suggested by the factors supporting impression number one. It seems to be further suported by an analysis of present day cost accounting in Great Britain. Since it is impossible to consider all of the details of cost accounting as it exists today, it is proposed to examine a few which seem to be outstanding.

In the following particulars American practice is followed: purposes of cost accounting; departmental overheads; timely reports presented graphically; and close co-operation between the cost accountant and the factory operatives. It is proposed to consider first the elements of similarity.

The purposes to be served by cost accounting include, according to one writer, statistical, economic, manufacturing and administrative. Or by another analysis, production cost determination, control of running expenses, economic use of capital, interim reports and constant responsibility and services to the industrial engineer. The extent of analysis, the technique of the system and the intricacy of its operation are all to be dependent upon the executive's use of the cost reports.

It is recognized in Great Britain that a single overhead rate does not provide for a satisfactory distribution of indirect expense. The manufacturing plant, or the "works" as it is known in England, must be divided into departments and expenses must, if possible, be identified with these departments. Thus we have overhead identified with departments and divided into a large number of classes, such as power cost, floor space cost, machine hour cost, and others.

The third similarity deals with more frequent and illuminating reports. The measure of any cost system is the extent of its utility. In turn, its utility depends upon the time the cost reports are available to the management. Delayed reports prepared at infrequent intervals are greatly to be deplored. Good cost accounting practice provides reports, issued frequently and in short order, which give to the management continuous touch with the activities of the factory.

Other characteristics of American cost accounting, found today in Great Britain include such items as interest and rent as elements of cost, the problem of idle capacity as it relates to overhead rates, the difficult problems of by-product costing and the use of standard or predetermined costing.

All of these procedures, found in present day cost accounting in Great Britain, as has previously been suggested, sound strangely American. Yet they represent the impressions gained by the writer in his study of cost accounting in that country. They do not comprise all of the elements which are characteristically like our own but they are typical and representative.

It is dissimilar and retains a portion of the characteristics of works accounting in terminology, in the various divisions of cost accounting one "allocates on cost" inuse of mechanical devices to permit economical handling of detailed materials.

There is naturally a retention of "Works" terminology. Just as one rides in the "tube" instead of in the "subway," takes a "lift" to the street instead of an "elevator" and continues his journey on a "tram" instead of a street car—so in cost accounting one "allocates on cost" instead of "distributes overhead," one has "constant expenses" rather than "fixed expenses" and the system is a "costing" system rather than a "cost accounting" system. Then, too, you "recover your factory expense" through overhead rates. While the terminology is distinct here, as in metropolitan transportation, it is a distinction of word labels, rather than of ideas.

The outstanding dissimilarity seems to be the preserving of the manifold division of cost systems. These include, single, multiple, terminal, operating, process and the like, referring to methods of production which seem to require modifications of treatment in cost accounting. This manifold division seems somewhat complicated when compared with the American analysis of order and process systems. It also seems inconsistent with the other characteristics of present day cost accounting in Great Britain.

The American accountant is impressed with a hesitation on the part of general accountants as well as cost accountants to make use of mechanical devices to save labor in handling masses of figures. The recent growth of English companies manufacturing such devices promises a change. There exist a few hopeful signs that mechanical devices will be more extensively utilized in the future.

As in the items of similarity, the few points of difference just mentioned do not cover every element which is distinct. But they seemed typical and are here presented as such. It is felt that the points of similarity are more fundamental, more determinative and more essential in their application to present day cost accounting in Great Britain.

The third and last impression is that the present industrial situation in Great Britain is compelling attention to the control and efficiency aspects of cost accounting.

Manufacturing conditions do not seem to be satisfactory to the British manufacturer. Here and there are instances of highly successful and very progressive industries, but, on the whole, one is led to feel that all is not well. There is a constant advertising appeal to patriotic rather than economic motives—"Buy British" is the slogan. There are disquieting statistics on unemployment and commissions dealing with disputes between labor and capital. Consumers and owners of capital are strongly criticizing the inefficiency of management.

To meet these problems, the British business man, who, is considered to be an individualist, has caused large federated associations to be formed. Many of these associations in an attempt to improve conditions have encouraged the adoption of uniform cost systems. A committee of the Federation of British Industries reporting on commercial efficiency made this statement: "The committee desires to emphasize the fact that although co-operative action can do much to improve general efficiency of industries, no amount of cooperation between individual firms can be really effective unless the internal organization of individual firms attains maximum

efficiency."[6] A British writer has stated the situation as an attempt to stabilize industry from within. And this internal stabilization is to be effected in part by the control over manufacturing activities which is possible through cost accounting systems.

The competition which the British manufacturer is finding not only in the world markets, but in his own country, is forcing an increased interest in more accurate methods. These methods involve scientific management, planned production, control of materials, effective wage payment plans, economical use of manufacturing capacity, and other features, all of which are closely related to cost accounting. Cost accounting seems due to obtain a cordial reception in this attempt to take up the slack in manufacturing processes.

Cost accounting is also considered as a partial solution to labor difficulties. The visitor in England gets the impression that while the laborer in England may earn less, the cost per unit is higher than in the United States. Time and again it is suggested that accurate cost thinking on the part of labor and capital will give both parties a similar point of view and lead to co-operation. The following quotation taken from an address by a leading British Chartered Accountant before the professional body at Bristol, England, and printed in our own Journal of Accountancy in July, 1927, illustrates the labor feature which has been mentioned:

"In concluding this survey of cost accounts, it is permissible to consider for a moment the public aspect of the question and its ultimate effect on the relations between capital and labor and between producer and consumer. These relations are at present very much under discussion and if industry, and all it means for the maintenance in reasonable comfort of a congested population, is to survive, it is clear that the era of suicidal strikes must be quickly banished and superseded by some more sensible methods of avoiding if possible, but at any rate of settling disputes. The impression is gaining ground that the present disastrous conditions are largely due to the intense secrecy which prevails as to the real cost of production and the disposal of the resulting profits. If every producer and wholesaler and retail dealer were to publish the salient features of his business, none would be unduly prejudiced unless he were retaining an undue profit. The experience of those members of the trade who were doing well would be available for the use of others doing bad, and in fact the same comparison of cost would be available between different producers, as is now available within one organization as between its different factories. Such publicity would in the long run tend to reduce cost of production and distribution throughout the industry to a fair division between wages and profits and to a fair price to the consumer."[7]

The unsatisfactory character of the industrial situation in Great Britain seems to be compelling an interest in the use of cost accounting. As Cropper has put it in his book on accounting, "Prior to the war cost accounting was regarded as a necessary nuisance, it is now recognized to be of first importance." It is suggested that this new appreciation of the utility of cost accounting, particularly in the light of present industrial conditions, will provide interesting developments in the immediate future.

In conclusion, attention should be called briefly to a number of related impressions. Many leading public accountants feel the responsibility for the present undeveloped state of cost accounting. Much attention is being given to scientific management as it is practiced in the United States and other countries. Institutes are being founded for the study of industrial administration in British schools of technology. The incoming chancellor of Aberdeen University stresses the demand that industry is making for adequately trained graduates. New provincial and city universities are being opened, which will in-

[6] September, 1918.

[7] Sir Arthur Lowes Dickinson, "The Construction, Use and Abuse of Cost Accounts," The Journal of Accountancy, July, 1927, p. 19.

clude the study of economics and business. A commission is set up headed by Sir Josiah Stamp to promote graduate study in the field of economics. These pictures of related activities are indicative of the environment in which cost accounting finds itself.

The cost accounting which is receiving serious consideration in Great Britain today is the same brand of accounting activity which we, in this country, term cost accounting. In Great Britain interest in this subject was renewed during and immediately following the war. It has been kept alive and increased by the many writings that have appeared since 1920, and by the organization of a national body to foster its development. Finally, it has been intensified by insistent demands of the present industrial situation.

Such factors tend to assure the visitor from this country that promising developments may be expected in cost accounting in Great Britain in the next ten years.

THE CHANGING OBJECTIVES OF ACCOUNTING

H. C. DAINES

WITHIN THE PAST FEW YEARS, considerable discussion has arisen among accountants concerning such questions as the proper basis or bases for valuing balance sheet items, what constitutes income, what are proper elements to be included in costs and the responsibility of the accountant for furnishing statistical information on internal operations. Much has been said for and against certain theories with respect to these matters and the debate bids fair to be of the usual interminable variety. It is the purpose of this paper to examine some of the objectives of accounting with a view to ascertaining if such a consideration may shed additional light on these questions. It would appear that much of the arguments are due to the different ideas of accountants, business men, economists and others as to what the fundamental purpose or "function" of accounting is. It is possible that much of the controversy would disappear if it is recognized that there are widely different purposes and problems for which accounting information is necessary and that the particular information which is needed will vary from one problem to another. Let us therefore examine these various points of view. This consideration of objectives might be divided roughly into those that pertain to general or financial accounting and those that pertain to cost accounting.

For the want of a better term this is called the "orthodox" view with reference to general accounting. The dominant note in this point of view appears to be that the accounting records should be kept so as to reflect that income which is legally available for dividends. This is the point of view which is usually reflected in our standard texts in accounting and appears to be approved and highly in accord with the public accountant's attitude as to the fundamental purpose of general or financial accounting.

It may be said that this view is particularly concerned with stressing what is called "realized income." This is generally supposed to mean that income should be recognized in the accounts only when a sale is completed. Just when a sale is completed is somewhat in doubt. It has been argued by different individuals that the signal for the recognition of income in the accounts should be cash receipts, acceptance of goods by the customer, shipment of goods to the customer, the rendering of an invoice or bill, passage of legal title to the goods, the possession of an enforceable contract, complete performance on the part of the vendor, partial performance on the part of the vendor, completion of production or manufacture or a combination of some of these. It is quite apparent that advocates of the "profits available for dividends" point of view are rather uncertain as to just the time when income does spring into existence, but in all these discussions, it has been tenaciously held that there must be a sale in order to *realize* profits. In other words fluctuations in the market value of unsold assets have no influence on the income account.[1]

Advocates of this view of accounting base their arguments as to what constitutes income legally available for dividends

[1] One much discussed exception to this rule is when the market value of inventories is below cost in which case the lower of cost or market rule is applied. The position is untenable. Either the advocates of this view should adopt a theory of income which would recognize all fluctuations both up or down, or else they should record declines in value of assets and the attending loss only when the sale is made. Of course the present practice of valuing inventories at cost or market whichever is lower as it is ordinarily handled distorts the cost of goods sold and gross profit figures in the income statement.

on the much quoted American Malting Company case (Hutchinson v. Curtiss [1904] 92 N.Y. S. 70). In this case it was held that dividends had been illegally declared. The court said among other things:

"These contracts were to deliver at a future time a product not yet made from raw material not yet purchased, with the aid of labor not yet expended. The price agreed to be paid at that future time had to cover all the possible contingencies of the market in the meanwhile, and might show a profit and ran the chance of showing a loss. When the sales actually took place, they were entered in the books. But to calculate months in advance on the result of the future transactions and on such calculations to declare dividends, was to base such dividends on paper profits . . . . and not upon the surplus or net profits required by law. It does not seem to me that you can divide . . . . a hope based on an expectation of a future delivery at a favorable price of what is not yet in existence."

There are other cases which support this view. In Jennery vs. Olmstead (36 Hun 536, affirmed 105 N.Y. 653, 13 N. E. 926) it was held that appreciation in the value of United States bonds held by a bank should not be taken into the profit and loss account and be made the basis of cash dividend payments. In Marks v. Monroe Country Permanent Savings and Loan Association (52 N.Y. St. Rep. 451, 22 N.Y. Supp. 589) the court held that a discount collected in advance in making a loan on a mortgage was not a proper credit to profits available for dividends.

John R. Wildman[2] cites the corporate statutes of Ohio (General Corporation Law of 1927, Section 8623-38) to the effect that "Cash dividends shall not be paid out of surplus due to or arising from (a) unrealized appreciation in value of or the revaluation of fixed assets. . . ." Apparently in all of the above decisions and the statute cited, the rule applied to cash dividends. By implication a stock dividend might not be held to be illegal.

[2] December 1928 issue of the Accounting Review, p. 399.

Hatfield[3] says "There has also been a series of decisions justifying the inclusion of an appreciation of the capital assets in estimating profits" and cites in substantiation Meyer v. Nethersole, 75 N.Y. S 987, 990 (1902); in re Spanish Prospecting Co., (1911) 1 Ch. 99: Ammonia Soda Co. v. Chamberlain, (1918) 1 Ch. 266. On the whole the better view seems to be opposed to such inclusions where cash dividends are to be paid out of such credits and hence adherents of the view that the accounts should primarily reflect the prevailing legal rules, are unrelenting in their attitude as to what should go into the income account. Thus H. A. Finney[4] states: "There is no principle of accounting more firmly established than the one which prohibits taking a profit by writing up a fixed asset which is not being sold." Again Wildman, in an article entitled "Appreciation From the Point of View of the C.P.A."[5] says: "The conclusion well may be reached, therefore, that an estimated increase in the value of assets, even if the estimated increase is recorded in the books of account of an enterprise, does not increase either actually, or constructively, the surplus available to that enterprise for distribution as cash dividends" . . . . and in the same article[6] "The preceding discussion of appreciation in its relation to capital seems to warrant the conclusion that an increase in the book value of an asset does not justify an increase in capital account unless the asset has increased value in use. Increased value in exchange does not constitute grounds for increasing capital," and again[7] "If an appraisal *relating to property* which is *subject to depreciation,* is used to create a surplus which will be apportioned by means of a stock dividend, the procedure is not only unsound in that it erroneously assumes an increase in capital, but it is misleading in

[3] Accounting, p. 283.
[4] Journal of Accountancy, XXXI, p. 389.
[5] Accounting Review, December 1928, p. 399 previously referred to.
[6] *Ibid.*, p. 401.
[7] *Ibid.*, p. 402.

that it conceals the burden which is placed on future earnings through the increased depreciation charges which must follow." Couchman[8] says that the write-up of the value of a patent "is not profit nor anything akin to profit and has no more real tangibility than the thinnest of thin air" and also[9] "I think I am justified in insisting that the chief functions of the accountant must relate to past transactions or current binding contracts and that other factors which he accepts must be kept at the minimum. . . . ."

As a corollary to this general theory of income proponents of this view have emphasized such matters as "the distinction between a saving and a profit," "anticipate no profits but provide for all losses" "apportion evenly income and expense from period to period." Thus various writers, (Finney, Kester, Hatfield) have pointed out that where assets are constructed by a concern at less than these could have been purchased on the outside that this constitutes a saving and not a profit. McKinsey[10] says "Income should not be anticipated, but provision should be made for all probable expenses" and Kester[11] in explaining the accountant's theory of income comments on "the desirability of stability, and evenness of profits rather than violent fluctuations as between fiscal periods." Couchman[12] writes: "To summarize briefly, the theory underlying the balance sheet of a going concern is that every classification displayed therein shall have resulted from accomplished financial transactions and/or unfulfilled obligations to which the organization is a party, modified by the attempt to allocate to proper fiscal periods all earnings and expenses.

Throughout his experience as a teacher and practitioner, the writer has been impressed with the notion that the profit point of view has largely dominated our discussions of theory and practice. In other words, accounting questions have usually been decided in the final analysis as to their effect upon the income account, and this has generally been in terms of what income is thought to be legally available for dividends. The adoption of the completed transaction theory of income has forced the accountant into a rather embarrassing position with reference to the valuation of his balance sheet items. In keeping with the double-entry process the accountant has thought it necessary to tie his income statement to the balance sheet. This has resulted in a rather artificial showing of values on the balance sheet and an attempt on the part of the accountant to justify this method of showing values as proper for a *going concern*. Further comment on this situation will be made in the next section of this paper. Permeating all of the discussions of orthodox accounting has been the suggestion of conservatism. According to some accountants even deliberate understatement of values was not only to be condoned but in many cases to be encouraged. In other words it was justifiable for accounting to conceal information concerning economic values.

The legal-dividend emphasis in accounting discussions may be said to have arisen in this country with the growth of the corporate form of business. It has been dominant for many years and still exists in the minds of most accountants as the primary objective of an accounting system. In recent years, there has been a tendency on the part of some to recognize other possible purposes of accounting.

II.

The World War with the attendant evils of inflation and the resulting decrease in the purchasing value of the monetary unit is primarily responsible for a new emphasis in accounting discussions. It has focused the attention of accountants upon the rules of valuation governing balance

[8] The Balance Sheet, pp. 127 and 45.
[9] The Journal of Accountancy, October 1928, p. 258.
[10] Managerial Accounting, p. 213.
[11] Accounting Theory and Practice, Vol. II, p. 413.
[12] The Journal of Accountancy, October 1928, p. 258.

sheet construction which have proven grossly inadequate in recent years and therefore tend to give a misleading picture of the real financial condition of a concern at a given moment of time. This emphasis on correct valuation may be called the Valuation or Balance Sheet Objective.

The proponents of this point of view contend that the orthodox rules of balance sheet valuation, viz. current assets and temporary investments at cost or market whichever is lower; fixed assets and permanent investments at original cost with a proper deduction for depreciation and/or depletion; and deferred charges on the basis of an equitable prorating between fiscal periods, are improper bases of valuation even for a going concern. It is contended that the ordinary investor or other lay reader of a balance sheet is not aware of the more or less arbitrary rules of valuation which accountants have adopted in balance sheet construction. The ordinary reader assumes that here are the *present* values of the assets owned by the concern and here is stated the *present* net worth. It is argued that this is a reasonable conclusion and that accountants should not expect readers of balance sheets to discard the value concept which is generally accepted in the every day world. The arguments that are usually advanced for the orthodox basis of asset valuation are well known and do not need repetition here. It may be safely said that no thinking accountant has failed at some time to note the inconsistency of these rules and to observe that at times they fail to correctly reflect the "true" financial condition. It is the belief of the writer that the present balance sheet valuation rules have been adopted largely as a result of subordinating the balance sheet point of view to that of the income statement.

Heretofore accountants have believed that market[13] values cannot be reflected on the balance sheet when market is higher than cost, without recording in the current income account what they believe to be an "unrealized profit." Because of the legal objection to the payment of dividends out of "unrealized profits" and the high regard for the theory of income which has prevailed, accountants have been willing to sacrifice the accuracy of the balance sheet, in order that the two statements might mathematically tie-up with each other. Hence many of the arguments and explanations about going concern values have been built up in an attempt to justify these more or less artificial values. In addition, of course, there has been the argument that market values are difficult to obtain in the case of many assets and hence such a basis should not be adopted. This, however, does not seem to be the real reason, because the accountant has been unwilling to show market values even in those instances where such information could unmistakably be obtained. An illustration of this is cost or market whichever is lower; not market at all times.

It can probably be agreed that one of the objectives of accounting should be to record accurately and fearlessly, the entire facts with respect to present financial conditions. In so doing, may it not also be agreed that accountants should adopt a basis of valuation—if one can be found —which is theoretically consistent and logical, which is intelligible, reasonable, and easily understood by the ordinary person, which furnishes current and up-to-date information, and which permits of objective verification. Certainly, balance sheets based upon the orthodox rules would not qualify under these criteria. In the formulation of business policies and decisions, conservatism may be an excellent fault; but if it is the function of the balance sheet to exhibit accurate and reliable values, the deliberate statement of values below undisputed market quotations is without defense. The aversion of the accountant to showing what he calls "unrealized profit" will be dealt with in a later section of this paper.

[13] Market is used in this paper to refer to the replacement cost in the same market and in the usual quantities in which the concern makes its purchases.

For the purpose of this discussion let it be assumed that the original valuation of assets is properly the cost price. Time will not permit an attempt at a theoretical justification of this point. Of course, it must be recognized that some exceptions need to be made to this rule due to the practical and sometimes theoretical difficulty of determining exactly what constitutes cost in a given case. The more difficult problem of valuation, however, arises subsequently to the original purchase, when the closing of the books and the preparation of the balance sheet present the problem of a proper basis for revaluation. There are four possible bases which might be adopted: (1) liquidation value, or that value which is likely to be realized if the assets were thrown onto the market in the process of an orderly or forced liquidation; (2) original cost with proper allowance for decline in value of current assets and allowances for depreciation and depletion of fixed assets; (3) capitalized income producing value; (4) present market price of replacing or reproducing a similar asset in its present state of condition.

The first basis of valuation—liquidation—has most significance to the creditor who may be interested in what the assets would bring in case of sale if the business were forced to close. This basis of valuation is not of primary interest to the stockholder, business executive, or general investor. They are most interested in the value of the assets to the company as a continuing business enterprise. It is probably safe to say that very few balance sheets would show solvency in case assets were valued on a liquidation basis. This, together with the fact that most readers of the balance sheet are not interested in liquidation, would seem to justify for ordinary accounting purposes the "going concern concept" of value.[14] It does not necessarily follow that this should be the same as accountants have held in the past. The liquidation basis of accounting has its place in accounting objectives under certain conditions.

The second method—original cost with proper allowance for decline in market value of current assets and allowances for depreciation and depletion of fixed assets—is the method now most commonly accepted. Its greatest advantage is the fact that an original cost method is most easily subject to objective verification; it is the easiest to use in practice. This basis of valuation implies the conception of a balance sheet as a history of what has happened, rather than an accurate picture of the present situation. Attention is called to the fact that the accountant has not followed the original cost basis consistently, but has modified it by market data when market proved to be lower than cost. This is illustrated in the case of current assets. Original cost is of little importance to the investor who is more concerned with present conditions and future profits. The past is unalterable. In the ordinary commercial enterprise the investment that has been made in the assets has little influence in determining present values or future earnings. This basis also fails to take account of the changing character of the monetary unit.

The third method—the capitalization of the income producing value of the net assets—has the merit of showing assets at more nearly their present economic values. Income in a business, however, is the result of so many varying factors outside of the assets in use that it does not appear to be a reasonable method for the accountant to adopt. It is impractical of application, since from the very nature of the case, the earnings of a business are the joint product of all the assets, conditions and services which the business possesses and uses. It is impossible, therefore, to impute on the basis of total earnings any particular value to any given asset. This method is useful in computing the value of

[14] Some economists, notably Professor Jacob Viner of the University of Chicago, hold the belief that the value which the assets would bring in the market is the only proper basis of value for use in accounting.

intangibles and has its place in accounting.

The fourth method—present market price or the price of replacement to a going concern—seems to the writer to be logically sound and practical enough in application to warrant its adoption. In a competitive economic order, the person who outbids his competitors for the means of production, controls production. The free play of competing interests meeting in the market are the forces which determine the valuation of economic goods. In an endeavor to explain this, economists hold that in a fluid market, price is determined by the interaction of the market demand schedule and the market supply schedule. Assets are valuable on account of the future services which they will render. The economist maintains that market value is an appraisal of the present worth of these services. The process of discounting involved in the translation of future values to present values is carried on by buyers and sellers who enter the market. This discounting process precedes the market activities of buyers and sellers, so that the market value *results* from these activities. Under ordinary circumstances the accountant can rely upon the operation of economic forces to determine market values; he is therefore not usually concerned with the discounting process. Market values when obtainable are also objective in character. In view of the fact that the operation of the laws of economics gives a concept of value which is accepted and generally used by the average person, it seems ridiculous for the accountant to establish a highly artificial basis for valuing balance sheet items which very few people understand. Of course, a market or replacement theory of value assumes a going concern and would provide for depreciation and depletion of such assets as are subject to these elements.[15] The economist's concept of static conditions, which is assumed in some of the discussions of economic theory, has no place in accounting. Since accounting is concerned with everyday affairs, one of its major functions should be to record faithfully and accurately, the changes which are taking place in business both in the nature of the assets and their valuation. As long as economic forces cause changes in value, the accountant should be an impartial recorder of these changes.

For accounting purposes it may be assumed that changing values of assets, as measured by the pecuniary unit, are the result of (1) changes in the market situation due to changes in the effective demand and supply, and (2) changes in the unit used in measuring value—in this country, the dollar—ordinarily spoken of as changes in the purchasing value of the dollar.

Whether the accountant has wanted to or not, he has been forced in recent years to alter his older theories of balance sheet valuation by taking into consideration appreciation of fixed assets. In fact appreciation in the value of fixed assets is now so widely permitted by accountants, whether reluctantly or not, that it may be said that the accountant has abandoned a strict adherence to his original cost less depreciation and depletion views. The accountant, of course, has failed to distinguish the two basic causes of appreciation: (1) the general decreased purchasing value of the dollar and (2) the economic forces of supply and demand that have operated to affect the exchange value of particular assets. Although the accountant in practice has recognized appreciation, he has hesitated to put himself unequivocally on record as favoring the recording of present values in the accounts. As a matter of fact, at the present time the accountant, who adheres to the orthodox rules of valua-

[15] It does not necessarily follow that depreciation should be computed on a straight line basis or on any other mathematical bases usually discussed in accounting texts. Much can be said for computing depreciation for a period on the basis of the market decline in value. The straight line basis of computing depreciation tends to give an appearance of regularity when there actually is no regularity. The greatest objection to the market decline method is the difficulty of securing accurate market quotations.

tion, is in the embarrassing position of overvaluing fixed assets purchased at the time of a higher price level. He thus lays himself open to criticism not only for lack of "conservatism" but actual overstatement. Under the cost of replacement theory, when the price level declines as is seen to be the case in comparing 1919 with 1929 prices, this decline in value of assets would be recorded on the balance sheet. Under orthodox accounting rules, assets could be carried at original cost less depreciation or depletion even though this book value was grossly in excess of the cost to replace at the date of the balance sheet. The cost of replacement theory is thus more "conservative" in some instances, than orthodox accounting has demanded.

Let us now consider the accountant's view with reference to income determination and its relationship to the problem of balance sheet valuation. As has been previously mentioned, the most common objection to showing cost of replacement values on the balance sheet is the hesitancy, when the market is higher than cost, to record in the accounts what is called an "unrealized profit." As a basis for dealing with this argument, let us examine the current theories of what constitutes income. Hatfield[16] says, "It is a peculiar fact that while business is carried on for the purpose of securing profits, while the distribution of profits is continually the subject of controversy in the courts, while the ascertainment of profits enters into the sum and substances of accounting and the nature of profits enters largely into the discussion of every economist, the term is still vaguely and loosely used without satisfactory definition by either economist, man of affairs, jurist, or accountant."

There are, however, many definitions of profits which have been made for varying purposes. The time which is available for this discussion does not permit a detailed consideration of the subject.[17] However, a difference in point of view, that is apparent from a cursory examination of many of these definitions, is worth noting for our purposes. Profits may be defined: (1) in the purely legal sense, i.e., those amounts of gain which are legally available for dividends and (2) in the accounting sense, i.e., those amounts of increment which it may prove desirable to record in the accounts. Unless the courts change their attitude as to the definition of "profits available for dividends" it is probable that the accountant will be compelled to segregate those amounts of net worth which conform to the arbitrary legal rules. Be that as it may, it does not prevent him from recognizing in his accounts [18] other increments or decrements of proprietorship, if it seems desirable to do so. It is fairly obvious that the accounting system could be devised in such fashion as to show in one income account the profit thought to be legally available for dividends, and in another, those other items affecting proprietorship which do not come under the arbitrary legal rulings. The profit and loss statement could be so designed as to show profits and losses arising from completed sales and in addition show separately the profit or loss due to market fluctuations of inventories, investments and fixed assets.

In their book entitled "Principles of Accounting," Paton and Stevenson state: "This argument (that the reflection of appreciation in the accounts, anticipates profits) is entirely fallacious. To use selling price in taking inventories—in other words to capitalize the services of the firm before those services are performed—is to anticipate profits. To recognize changing capital costs and equity changes due to the appreciation of working or fixed assets is an entirely different thing. Suppose .... materials .... cost fifty cents and that

[16] *Op. cit.*, p. 241.

[17] Note article "What is Profit" A. C. Littleton, The Accounting Review, Vol. III, No. 3.

[18] If it is thought desirable the double-entry records could be kept on the usual orthodox cost basis and the fluctuations in market value could be adjusted in working papers for statement purposes.

cost of reproduction becomes sixty cents. This is appreciation. To inventory these materials at eighty cents—selling price—would be to forecast profits."

Hatfield[19] facetiously remarks: "The accountant transcends the conservatism of the proverb 'Do not count your chickens before they are hatched' saying 'Here are a lot of chickens safely hatched, but for the love of Mike use discretion and don't count them all, for perhaps some will die.' "

Turning now particularly to the effect of the changing purchasing value of the dollar, which is most apparent in connection with the valuation of fixed assets, it may be argued that most of the so-called appreciation is nothing more than the result of the decline in the exchange value of money. In so far as fixed asset appreciation is due to this fact, the accountant, in recording appreciation in the accounts, is merely making a correction for errors caused by his fluctuating unit of measurement. Such a correction is not in any sense the introduction of unrealized profits. It is merely an attempt to put the dollars expended, say in 1913, 1919, 1921, and 1929, on a comparable basis. Asset values on such a basis should greatly aid the management and all other readers of the accounting statements in forming correct estimates of financial condition.

The next question which may be properly raised, is can the replacement cost basis of valuation be adopted with safety and are there any limitations to its use in practice? Accountants are already recognizing the cost or replacement basis of valuation in practice and there seems to be no reason for not frankly recognizing the change with reference to valuation principles. The recording of appraisals on the books; the use of market in valuing stocks and bonds in the case of insurance companies, endowed institutions, and dealers of securities; market values for inventories in the packing industry and farm products, are all examples in point.[20]

The greatest objection to the use of cost of replacement, in balance sheet valuation, is not that it violates conservatism or anticipates profits but that in certain instances it is very difficult to ascertain. In some cases, such as permanent investments, plant sites, construction jobs, etc., almost no reliable data may be obtained for use in market valuation. Where such a condition is met the market basis for value may have to be abandoned in favor of original cost. However, this is not a vital objection to the method, as the accountant is already abandoning original cost in favor of market in cases already cited. Such inconsistencies could be taken care of by an explanatory statement of the basis of valuation. On account of the expense involved, to argue for yearly appraisals of fixed assets, would sound impractical. When price levels remain fairly constant they would prove to be unnecessary. During periods of price fluctuation an adjustment could be made in previous appraisals to reveal this condition or an entirely new appraisal resorted to. In this connection, price indexes may prove very helpful in the future to both the accountant and the appraisal engineer. At the present time, because these indexes have been constructed to measure changes in the purchasing power of the dollar in the field of wholesale prices, retail prices, consumer's goods, prices, etc., they have limitations for use by the accountant. The compilation of price index data, however, is developing rapidly into specialized industries and commodities (witness the building construction price index and others) so that in time the accountant may be able to take

[19] *Op. cit.*, p. 256.

[20] In the case of security dealers and in the packing and agricultural industries, profits are really anticipated in the usual sense of the term, since inventories are valued at sales price with allowance in some cases for selling expenses. This brings into the accounts not only fluctuations of market replacement costs, but also "capitalizes the services of the firm before they are performed."

his original cost values and adjust them by use of a price index for each particular class of assets.

The cost of replacement theory works most satisfactorily for those commodities in which there is an organized market with reliable quotations. Here market prices are easily obtainable. However, under unusual conditions of prosperity or depression caution should be exercised in the use of these quotations. It was generally recognized that in the demoralized markets of 1920 and 1921, that some of the quoted prices did not fairly reflect the real market situation. Under the replacement theory of valuation, conservatism would play its part within the range of reasonable doubt. It would not interfere, however, when unquestionable evidence of increases or decreases in value, was at hand.

The introduction of replacement values in accounts, not only is of service to the general reader of the balance sheet, but its greatest value is to management, itself. Fixed assets would be recorded on the basis of replacement cost with the depreciation rates based thereon. Depreciation reserves would provide for the recovery in costs of the replacement value of assets rather than original costs. Comparison of costs in plants which were constructed under different price levels could be made more accurately. Valuable leaseholds would be recorded on the books and the amortization of same would be reflected in operations. Costs would be computed on the basis of current economic values; judgments formulated therefrom would not be made from historical original cost information, but on the basis of present economic data. Profit and loss statements would show the income derived from the buying and selling operations separate and distinct from that which arises through fluctuations in replacement values. Many illustrations could be given of erroneous conclusions drawn from reports furnished from our present methods of recording economic data in the accounts.

This discussion largely simmers down to the question, what are the proper objectives for accounting? Is it the function of accounting to show *original cost* or *current economic* values or both? Orthodox accounting has maintained cost is the proper goal, but in the opinion of the writer this has been decided more on the basis of expediency than careful analysis. Cost is no guarantee of value. Property is sometimes acquired through donation, through careful bargaining, or through discovery, the value of which may have little relationship to cost. Value is a constantly changing thing. It is beyond serious doubt that a business enterprise may lose a considerable part of its money capital through the fluctuations in the value of its properties as well as through actual business operations. The persistent use of cost has a tendency to result in misleading statements. Mr. Howard W. Greer in the May, 1928 issue of the *Certified Public Accountant* [21] in commenting on the writer's article which appeared in preceding issues on that publication, suggests the desirability of presenting both original cost data and present values in a comparative balance sheet with columns headed "Original Cost" and "Present Value." This would seem to be an excellent idea.

Let us now summarize briefly the gist of these arguments.

1. The orthodox rules of valuation which accountants have repeated in parrot-like fashion for several decades do not now stand the best of the business world and are fast giving way to the market concept. This has been because: (a) these rules are highly artificial and more or less arbitrary; (b) they are based upon a faulty assumption of a static economic world; (c) they are difficult to understand by the laymen and are not in accordance with the ideas of value which are dealt with in everyday life; (d) they are in some cases inconsistent and illogical in their very statement.

2. Market value or cost of replace-

[21] *Op cit.*, p. 137.

ment, is a more satisfactory basis: (a) it can be justified on the basis of economic reasoning; (b) it reflects more accurately the everchanging value facts which are encountered by business enterprises; (c) it can be introduced into the accounting records without doing violence to any accounting or legal theory of income; (d) it puts the accountant in the position of furnishing current and up-to-the-minute information instead of being classed as an historian; (e) it provides information which, for purposes of comparing operating results and formulating managerial decisions and policies, is preeminently more useful.

3. Satisfactory information, such as market quotations, appraisals and price indexes, is fast becoming available, which makes it feasible for the accountant to adopt the cost of replacement value in practice. Where satisfactory evidence on market is not obtainable the accountant still may resort to original cost figures. The face of all balance sheets should contain information as to the basis of valuation used for each asset.

4. The accountant will still have abundant opportunity to exercise conservatism within the *range of doubt*—not where undisputed evidence of value exists. When current market quotations do not seem to agree or where the quotations because of the stage of the business cycle seem to be out of line with intrinsic values, the accountant can then adopt the conservative attitude.

If time and space permitted I should like to make some comments on the subject of valuing intangibles—particularly good-will. Here again cost is very misleading, and should be replaced with an attempt to ascertain the discounted value of future excess earnings. I quite agree with the prophesy of Mr. P. W. Pinkerton, in his book "Accounting for Surplus"[22] "the time may come, although only the faintest suggestions of it are heard so far, when it will be considered proper—yes, necessary, for accountants to see that intangibles are properly appraised. It may be demanded that patents and goodwill be given values based on their earning power. And who will say that such a procedure, if the proper rules for accomplishing it could be worked out, would not be more desirable and more valuable than the present practice which so often results in showing at a high value non-existent goodwill (which had properly been paid for with capital stock), or in showing at the mere cost of recording them patents which could be sold for millions?"

It is quite apparent that if there is logic to the reasoning that accounting should show present values, it would seem probably that the public accountant of the future will be much more of an appraisal expert than he has been in the past.

III.

The income tax objective is reflected in the attitude on the part of certain business men and accountants that the books of account should be kept so as to properly record the taxable income. It cannot be said that many believe that this point of view constitutes the primary purpose of accounting. However, since the high rates of income and excess profits tax have been imposed there has been increasing emphasis on the part of the accountant to make his books conform to the requirements of the Treasury Department. This has been accentuated by the requirements of the Department that deductions for depreciation, depletion, bad debts and certain other items be actually recorded in the books. In the recording of various items, particularly of a debatable character, the rulings of the Department have been constantly advanced as a proper reason for handling individual transactions in a certain fashion. It is true that in the income tax legislation Congress instructed the Treasury Department to be guided by "good accounting practice," but it is quite evident that the various laws and the rulings

[22] *Op. cit.*, p. 87.

of the Department also have had a reverse influence. In other words, "it was good accounting practice" to follow the rulings of the Department.

In many discussions of income the decisions of the Treasury Department and the Federal Courts have been referred to in the accounting literature. As an illustration, Mr. Wildman in a recent issue of THE ACCOUNTING REVIEW[23] in which an argument was presented against the recognition of appreciation in the accounts, quotes from the case of Eisner v. Macomber (252 U. S. 189) in which the court said "Enrichment through increase in value of capital investment is not income in any proper meaning of the term." It will be remembered that this was the case in which the Supreme Court held stock dividends to be non-taxable. There are many other illustrations in the literature of accounting where similar arguments have been advanced.

Let it not be understood that the writer is arguing against the recognition of this point of view. In fact if anything, this paper is an attempt to demonstrate the need for the frank recognition of this and many other points of view in our discussions of accounting problems and in our courses of instruction. Without attempting to stress this point further it can be said without fear of contradiction that accounting has been passing through a period in which it has been influenced to a greater or less extent by certain more or less arbitrary rulings of a tax department.

IV.

The managerial objective in accounting has always been more or less present but within the last few years it has received greatly increased emphasis. Just as the growth of the importance of the corporate enterprise exerted its influence on accounting originally through the emphasis on the legal-dividend point of view, the increasing size of the business unit has called for an ever-increasing amount of managerial information for use in controlling the operations of these unwieldy and gigantic businesses of our present age. This particular viewpoint may be said to be that of the internal accountant or controller rather than that of the public accountant. It has been emphasized in the writings of McKinsey, Bliss, Andersen, Gregory and others.

In the opening paragraph of his book[24] "Management Through Accounts" Bliss says: "The real function of all accounting work is to render a service to business management. The service lies in placing before business executives the most complete information on their affairs, analyzed and interpreted so as to be readily understood and used effectively in guiding and controlling their operations and transactions more profitably, economically and conservatively." And again[25] he writes: "Accountants should accept a broader conception of the function of accounting work in business. The beginning of accounting service lies in proper account keeping. The end and ultimate object in all accounting work is found in the interpretation of statistics and accounting data to executives for their use in business."

This point of view is radically opposed to a limitation of accounting to the conventionalized practice of classifying all quantitative facts into two categories; first those data that affect the balance sheet, and second, those data that affect the income statement. As Gregory has said[26]

"A business is a rapidly changing complex thing, and the executive does not and cannot attack his problems with the sole idea of a solution that leads only to a correct showing of, (1) financial condition facts, and (2) expense and gain facts. What business needs are reports that give a more complete analysis of the performance of managers; reports that fur-

[23] December 1928, p. 399.

[24] Page 3.

[25] *Op. cit.*, p. 4.

[26] Accounting Reports in Business Management, page 9.

nish data upon which future operations can be based; reports that aid in preplanning and checking operations; reports that give a *modus operandi* for locating losses and devising remedies therefor. Correct valuation principles, and classification of accounts are highly necessary, but of more importance is a knowledge and use of reports that give a greater control over the solvency and the security of the invested capital." And again,[27] "The accountant must first appreciate the fact that his greatest responsibility to the business community is not primarily that of expanded police power, in detecting and proving fraud, etc., but of constructive financial advisorship. Misappropriation, misrepresentation and dereliction of fiscal duty must be detected, and only the expert accountant is qualified for this work. But this part of the accountant's work constitutes a small portion of the potential field of useful service open to the profession."

The managerial point of view with respect to accounting places emphasis on accounting as an internal control device. It does not attempt to differentiate accounting and statistics but points out the necessity of vital, living business data. Some of these data may come from the double entry records of accounts but a fairly large part may originate from cost sheets of the factory, questionnaires and special studies of various kinds, statistical data, and working papers not akin to the conventionalized type. Thus according to this view, accounting should concern itself primarily with the solution of managerial problems. It would attempt to furnish data not only on financial condition and income and expense matters but would be concerned with a host of other problems such as buying and selling problems, productivity of advertising, productivity of labor, machine rates, idle time, differential costs, pricing, operating standards, budgets, the most productive type of internal organization and scores of other problems which have to be dealt with by management. The accountant thus becomes a solver of business problems whenever quantitative data may be used. This point of view is not limited to general accounting but also has been particularly stressed by cost accountants in recent years. It is also being reflected in the work of the public accountant in the emphasis that is being placed upon management counseling. The development of the financial and industrial investigation is one aspect of this increased emphasis.

[27] *Op. cit.*, page 12.

This point of view particularly emphasizes the function of accounting to construct standards wherever needed throughout the entire organization and to establish records that will accurately measure performance in terms of these standards. Budgetary Control thus becomes an important phase of managerial accounting. No longer is accounting limited to purely balance sheet and income considerations. It is now concerned with the use of quantitative data (1) the solution of business problems and the formulation of business activities. It is no longer limited to a double-entry technique; its technique is now manifold and depends largely on the ingenuity of the individual in each case.

V.

This purpose of accounting need not be particularly stressed in a discussion of this kind since it probably has never been thought of as a major objective of accounting. It, however, has played a rather influential part either consciously or unconsciously in accounting thought and in the construction of accounting systems.

It may be said that this point of view consists of imposing to the owners the accuracy and the fiduciary accountability of the management and their employees for the cash and other property which pass through their hands. The time has long passed since the owners of a business enterprise could personally check-up on those in their employ who are acting in a fiduciary capacity. Absentee ownership as represented in the corporate form of or-

ganization and the delegated responsibility to the executives and by them in turn to subordinates has made it imperative that accounting records prove or disprove the honesty and integrity of those to whom property and the authority to contract obligations is intrusted. The development of world wide markets has called for an increased emphasis on this objective since it has made necessary the establishment of Branch factory and marketing agencies. Since these are located at a distance from the home office operations they have called for the development of special types of records to prove the fiduciary integrity of the branch employees. This objective of accounting has been responsible for the establishment of carefully planned systems of internal check, and in addition the development of internal auditing departments which are a permanent part of the organization of a business enterprise.

The need on the part of the management to prove its accountability to the stockholders, board of directors and short and long time creditors has of course been largely responsible for the development of the public auditing profession. In spite of the emphasis that has been laid in recent years upon the management counseling aspects of the work of the public accountant, the practice of most public accounting firms still largely consists of proving the fiduciary integrity of the management and their employees and the preparation of certain conventionalized statements. It may be said that this objective of accounting will probably always play an important part in discussions of both the public and private accountant.

VI.

Time will not permit a detailed consideration of the special objectives of accounting for different types of business enterprises and institutions. A few scattering comments, however, will be made on non-profit institutions. As an example let us consider the functions of accounting in a college or university. Here is an enterprise that is not ordinarily conducted for profit: it is primarily concerned with rendering educational service of a certain type. Accounting will not therefore be concerned primarily with a profit and loss showing and a statement of financial condition. It should prove that the funds which have been donated or acquired have been properly accounted for and used for the purposes for which they were intended. This calls for a careful distinction in endowed institutions between endowment funds, plant funds and current funds. Accounting in this type of enterprise should in addition be interested in proving to donors, taxpayers, and others the efficiency of the institution in rendering the educational service for which it was chartered. It should develop units of measurement, for proving the volume and quality of its educational service.

Of course the double entry records must furnish the usual financial data that are necessary for the business operation of the enterprise but the purpose of accounting in an institution should be conceived of in a much broader light than this. Many of the objectives which have already been discussed also apply but of course there is no need for the recognition of the income tax point of view except in those cases where an educational institution is organized for profit. What has been said with reference to an educational institution applies to many other philanthropic organizations, such as hospitals, charitable organizations, Y.M.C.A.'s, etc.

Similar considerations are apropos with reference to governmental bodies. A government is concerned principally with rendering service to its people. Revenues are raised in order to meet the necessary expenditures for such service, not to make a profit. Here, a major consideration of accounting is its relationship to budgets and appropriations. Because a governmental body is usually engaged in rendering various kinds of services, and owing to the requirements of the laws affecting the raising of revenues and the authorization of

expenditures, transactions are recorded by funds, that is, according to the various classes of services which are being rendered. One of the principal characteristics of governmental bodies as well as endowed institutions is that the integrity of each fund must be kept inviolate. In the case of endowed institutions this calls for a careful distinction between endowment funds and the income arising therefrom.

A still different objective of accounting exists in the accounting systems of public utilities. Here, a regulatory body lays out the system for the primary purpose of controlling the price to be charged by the public utility for the service to be performed. Such a system primarily emphasizes the distinction between capital and revenue items. Rules of valuation are established for rate making purposes in accordance with the social theories adopted by the public utility commission and the courts as to whether the stockholders or the consumers are entitled to the benefits of unearned increments. Various items are more or less arbitrarily included under the heading of "going value" in accordance with the views of the commission as to whether they should be capitalized for rate making purposes. Of course there is need for the recognition of all of the other objectives of accounting in public utilities.

Other examples of special objectives of accounting exists in the use of accounting by the Federal Trade Commission in their investigations of unfair methods of competition and by the Tariff Commission in their attempt to "equalize ascertained differences in costs of production of like or similar articles in the United States and in the principal foreign countries." In these instances accounting becomes an instrument in the social control of business activities. Its goal, therefore, may be quite different than what it is conceived to be in the ordinary business enterprise.

VII.

The distinction between cost and accounting and general accounting is very well stated by Jordan and Harris in the opening paragraph[28] of their book "Cost Accounting-Principles and Practice."

"The purpose of cost accounting, a branch of general or commercial accounting, is to provide detailed information as to the separate components of cost which have entered into a product. General accounting shows merely the total profit or loss of the business as a whole; cost accounting shows the profit or loss on each unit, whether the unit be the job, contract, line of product, operating department, or process. It is 'accounting for units' that differentiates cost accounting from general accounting."

The chief purposes of cost accounting are generally said to be: (1) to determine costs in order to properly establish a selling price; (2) to furnish management with information which will reduce waste and inefficiency in production; and (3) to assist in determining the profitable and unprofitable lines.

A more complete statement of the aims of cost accounting is given by Clarke.[29] "To sum up, the demands made upon cost accounting may be roughly catalogued under the following ten functions: (1) to help determine a normal or satisfactory price for goods sold; (2) to help fix a minimum limit on price-cutting; (3) to determine which goods are most profitable and which are unprofitable; (4) to control inventory; (5) to set a value on inventory; (6) to test the efficiency of different processes; (7) to test the efficiency of different departments; (8) to detect losses, wastes, and pilfering; (9) to separate the 'cost of idleness' from the cost of producing goods; and (10) to 'tie in' with the financial accounts."

It can be readily seen from the above statement of the "functions" of cost accounting that several of the various objectives which have been considered under the subject of general accounting are present. Thus the profit and loss, and balance sheet

[28] Page 3.

[29] The Economics of Overhead Costs, page 236.

points of view are reflected in "(5) to set a value on inventory" and "(10) to 'tie in' with the financial accounts." The accounting for fiduciary responsibilities is seen in "(8) to detect losses, wastes, and pilfering." The managerial influence, however, is predominant as is shown under: "(1) to help determine a normal or satisfactory price for goods sold;" "(2) to help fix a minimum limit on price-cutting;" "(3) to determine which goods are most profitable and which are unprofitable;" "(4) to control inventory;" "(6) to test the efficiency of different processes;" "(7) to test the efficiency of different departments;" and "(9) to separate the 'cost of idleness' from the cost of producing goods."

Our discussion of the objectives of cost accounting, however, will center around the discussion of what constitutes "cost." The types of cost systems usually discussed in cost accounting texts place emphasis upon the determination of "actual" costs of a job or process. In so far as predetermined overhead rates are used, the attempt at determination of actual costs is inaccurate. But in the main, the discussions of cost accounting until recently have been confined largely to considerations of what constituted so-called "actual cost." Some of the most troublesome questions of cost accounting—such as methods of overhead distribution, the inclusion or non-inclusion of a theoretical interest and/or rent charge, etc.—have arisen in this connection.

Within recent years it has been pointed out that not only is it essential that the management know its actual costs, but that it is just as important that facts be furnished as to the extent the actual costs deviate from what is a proper or standard cost. Hence there has arisen a new objective of cost accounting, viz., the determination or forecast of what costs should be under normal conditions and the presentation to management of reports, by jobs, processes or departments, which compare the actual cost with the standard cost. Whenever such standards are made a part of the double-entry accounting system, what is now called a standard cost system, comes into existence.

Whether the actual or the standard cost should be the values used in the double entry accounting system and for inventory valuations on balance sheets or income statements is still a debated question. In any event standard costs are winning much favor with business executives and now constitute an important objective of cost accounting. Of course standard costs represent merely an increased emphasis on the managerial point of view: "namely, the intention of the management to learn the extent of variation of actual from normal or standard costs and the use of this variation as a barometer of operating efficiency." [30]

Most of the discussions of cost accounting have been concerned with a discrimination between the method of treatment, or the items, which should be included as a regular part of the double-entry cost system. It is probably apparent from Clark's statement of the functions of cost accounting that no single concept of cost will satisfy all of the needs of the business man. In fact he says [31] "if cost accounting sets out, determined to discover what the cost of everything is and convinced in advance that there is *one* figure which can be found and which will furnish exactly the information which is desired for every possible purpose, it will necessarily fail because there is no such figure. If it finds a figure which is right for some purposes it must necessarily be wrong for others."

Again[32] Clark comments with reference to the ten functions of cost accounting previously mentioned: "Broadly speaking: (1) i.e., to help determine a normal or satisfactory price for goods sold calls for a knowledge of what we may call the total economic sacrifice of production, including interest on all investment; (2) i.e. to help

[30] Amidon and Lang, Essentials of Costs Accounting, p. 270.
[31] *Op. cit.*, page 234.
[32] Page 236.

fix minimum limit on price-cutting, calls for a knowledge of differential costs; (3) i.e., to determine which goods are most profitable and which are unprofitable and (4) i.e., to control inventory, call for total economic sacrifice, with possible deductions in special cases; (5) i.e., to set a value on inventory is controversial, some accountants including total economic sacrifice, while for certain purposes valuation is limited to operating expenses; (6) i.e., to test the efficiency of different processes and (7) i.e., to test the efficiency of different departments, again call for total economic sacrifice; (8) i.e., to detect losses, wastes, and pilfering, calls for complete records of actual costs and also for standards of efficient performance with which to compare them; (9) i.e., to separate the 'cost of idleness' from the cost of producing goods, calls for residual costs (total cost less sum of differential costs; and (10) i.e., to 'tie in' with the financial accounts, calls for total operating expenses, but nothing more."

Time will not permit a detailed examination of these various objectives and the writer of this paper is so fully cognizant of his own limitations in this respect that he will not presume to improve on the very searching analysis and able discussion which has been made by Mr. Clark.

It is quite apparent that cost accounting of the future will be concerned with a number of different objectives and will use in addition to double entry a sort of statistical technique and a method of analysis yet to be refined.

VIII.

The foregoing discussion may lead, perhaps, to the following conclusions:

1. A frank recognition of the widely different demands which are being made upon accounting. It has been pointed out that in the construction of accounting systems and the preparation of reports the accountant is required to meet the following points of view:

   a. The legal-dividend point of view
   b. The valuation or balance sheet point of view
   c. The income tax point of view
   d. The managerial point of view with its manifold requirements
   e. The fiduciary-accountability point of view
   f. The actual cost point of view
   g. The standard cost point of view
   h. The differential cost point of view
   i. Special objectives for varying types of businesses

Too often accounting discussions have been predicated on the assumption that there was only one objective of accounting.

2. Accounting can no longer be confined to a double entry method of technique. In order to meet these various points of view, accounting must recognize that it has outgrown the bounds of a double-entry method. It is already developing statistical and tabulating machine methods for recording, summarizing, and analyzing business data. For the purpose of certain conventionalized reports, the accountant will need to establish an all-purpose system that will attempt to meet the requirements in so far as possible of the various points of view. It is quite apparent that the information furnished from this all-purpose system will need to be modified through adjustments of various kinds in special working papers and statistical calculations in order to furnish the necessary varied information.

3. The accountant of the future will be of a distinctly different type. For purposes of aiding the management in the solution of business problems, he will possess in addition to his double-entry technique, a new type of statistical technique. In a broad sense he will be a research engineer. He will be well acquainted with a new type of business economics and management philosophy. Accounting and statistics will be his tools; the entire scope of internal and external business problems that are reducible to mathematical measurement will be his field.

In the field of public accounting, there will develop management counsellors who will attempt to serve various businesses in this same capacity. There will probably always be the necessity for the public auditor; but there will be increased emphasis on the responsibility of the public auditor for the values to which he certifies. He will become an appraiser of values. This is in keeping with the demands of the banking fraternity and others that the public accountant assume responsibility for inventory values.

The accountant in the past has been a crystal gazer; he has been so enamored with his double entry technique that he has failed to see the opportunities for larger service that are developing all around him.

HATFIELD'S PARADOX

JOHN B. CANNING

In the December, 1928, number of the Review Professor Hatfield drew attention to an interesting paradox. If two identical bonds are bought on the same day, one of them at 90 and one at 110, the aggregate cost is equal to the aggregate par and the yield rate on the holding is equal to the nominal rate on the bonds. But, as Hatfield demonstrates, if the buyer separately amortizes the premium on one and the discount on the other by the conventional compound interest formula the aggregate interest earnings thus found in the several periods will diverge from the uniform coupon receipts. Whether the buyer acquires two bonds at par or one at 90 and one at 110 seems substantially to be a matter of indifference to him. The bonds and their total cost remaining the same, why, if at all, should a mere difference in dispersion of purchase lot yield rates be allowed to effect a difference in the time-distribution of the buyer's interest earnings.

The paradox exists; and it is much more extensive than Hatfield expressly indicates. It seems worth while to inquire what kind of paradox it is. Grant his assumptions: 1) that the figures for concurrent interest earnings on two such identical investment aggregates as he describes should not diverge from one another; and 2) that the "theoretically correct" interest earnings figures are those found by applying the rate implicit in the aggregate cost. The errors, then, that result from separately amortizing the premium and the discount must be due to error in the conventional method of amortizing either, 1) the premium, 2) the discount, or 3) both the premium and the discount. Can it be that there is an error in the usual method when one lot only is purchased at a premium or at a discount? If so, what is the error and what is the theoretically correct "net adjustment"? When three or more purchase lots, all bought to yield different rates, are simultaneously held must there be a correction? If this is true at all is it equally true no matter whether all are bought at premiums, all at discounts, or some at premiums and some at discounts? Does the paradox include the case of simultaneously held bonds that were required at different dates and to yield different rates? Does it include the case of bonds now held that do not fall due on the same date—as in the instance of serial bonds of the same issue? The reader can readily supply many more variations of the theme.

No attempt will be made to make a perfectly general explanation of the paradox or to offer a perfectly general solution for the "net adjustment."[1] No opinion will be ventured upon the question of theoretical accuracy of treating several purchase lots as though they were one. The paper is limited to showing that the paradox can arise from the algebraic properties of the "average yield rate" or single compound interest rate implicit in the cost of an aggregate holding acquired in more than one purchase lot. Some, but not all, of the properties of the mean yield rate will be considered. Some questions about theoretical accuracy and about the consistency of Hatfield's assumptions will be asked. Some comment will be made on the meaning of bond premium and bond discount.

Because it is convenient both in analysis and in exposition to begin with a form of investment less complex than a bond, the several elements of a bond will be discussed separately. For the moment the annuity

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[1] The formula accredited by Hatfield to Mowbray on page 344 of the article cited is not conveniently applicable to more than two purchase lots.

element is disregarded and only the so-called principal is considered. Suppose an investor buys on the same day m non-interest bearing notes due n periods hence. Each note promises to pay a unit of value at maturity. The prices paid are $P+q$, $P+r$, $P+s$, ... The value of P is such that $q+r+s+ \ldots . = 0$. That is to say, mP is the aggregate cost of the m notes and P is their average (arithmetic mean) cost. Let the unequal rates implicit in the purchase lot prices be i', i'', i''', . . . and let these be rates considered as compounding once a period. $I+i'$, $I+i''$, $I+i'''$, . . . may be abbreviated to read I', I'', I''', ... Call the rate implicit in the aggregate cost, the mean rate, i, and represent $I+i$ by I. To avoid complex expressions let $1/I'$ be represented by a, $1/I''$, by b, $1/I'''$, by c, and so on.

We have then $P+q=a^n$, $P+r=b^n$, $P+s=c^n$, . . . Since by assumption $q+r+s+ \ldots = 0$ and $m/I^n = mP$, the aggregate cost of the notes, we obtain

$$mP \quad m/I^n = a^n+b^n+c^n+ \ldots . \tag{1}$$

$$I^n = m/(a^n+b^n+c^n+ \ldots) \tag{2}$$

and

$$i = \left(\frac{m}{a^n+b^n+c^n+\cdots}\right)^{1/n} - 1 = \left(\frac{1}{P}\right)^{1/n} - 1 \tag{3}$$

so that

$$P = \frac{a^n+b^n+c^n+\cdots}{m} \tag{4}$$

Remembering that, a, b. c, ... are the reciprocals of I + the several yield rates to be averaged, it will be seen that (2) is in the form of the equation for the harmonic mean and (4) is in the form of an arithmetic mean of reciprocals. I^n follows the harmonic law while P is always the reciprocal of I^n.

In any practical case $n>0$ and $i>0$. But within these limits n and i may take on any finite values we may assign.

Given a unit period and a set of values i', i'', i''' . . . . , i is not independent of the value of n but diminishes as n increases. Expressions (6), (7), and (8) prove this. By (2) we have

$$I^n = m/(a^n+b^n+c^n+ \ldots)$$

But if i were a constant then $1+i$ would be a constant also and we should get

$$I^nI^n = I^{2n} = m/(a^{2n}+b^{2n}+c^{2n}+ \ \ldots \ ) = m^2/(a^n+b^n+c^n+ \ldots)^2 \tag{5}$$

But

$$\frac{m^2}{(a^n+b^n+c^n+\cdots)^2} > \frac{m}{a^{2n}+b^{2n}+c^{2n}+\cdots} \tag{6}$$

For, dividing by m and clearing of fractions, we obtain $m(a^{2n}+b^{2n}+c^{2n}+ \ldots) > (a^n+b^n+c^n+ \ldots)^2$ (7)

If the right hand member of (7) is expanded, m^2 products will appear. Of these, m products are the $2n$th powers of a, b, c, . . . and $m(m—1)$ are cross products. Each possible cross product will occur twice so that there are $m(m—1)/2$ cross product terms. In the left hand member we have m^2 powers of the $2n$th degree. If m of these are cancelled against the corresponding terms in the right hand member there will be $m(m—1)$ left. These can be arranged into $m(m—1)/2$ pairs to correspond with the $m(m—1)/2$ cross product terms and we should find that

$$a^{2n}+b^{2n}—2a^nb^n>, \ a^{2n}+c^{2n}—2a^nc^n>0, \ldots$$
$$b^2+c^2—2bc>0, \ldots \tag{8}$$

and so on to $m(m—1)$ sets. This series converges, of course, and the limiting case is found when $a=b=c= \ldots .$ In this limiting case only will it be true that $m(a^{2n}+b^{2n}+c^{2n}+ \ \ldots \ ) = (a^n+b^n+c^n+ \ldots)^2$. For then $a^{2n}+b^{2n}—2a^nb^n—2a^{2n}—2a^{2n}=0$ and so on. Only when $i'=i''=i''' = \ldots$ is the value of i independent of the value of n.

Now if we consider the annuity element of a bond, and leave aside the par or principal, we shall see why interest earnings calculated by the mean rate, i, diverge from interest earnings calculated on the separate annuities. Suppose the simul-

taneous purchase of m concurrent annuities each paying 1 per period for n periods. Let $i', i'', i''', \ldots$ be effective rates on the several annuities such that

$$i' \neq i'' \neq i''' \neq \ldots\ldots$$

These m annuities may be considered as consisting of n sets of m non-interest bearing notes each. Of these one set of m notes matures in one period, one in two periods, and so on to one set in n periods. But by (6) (7) and (8) it is proved that the mean rate for the set maturing in one period is greater than the mean rate for the set maturing in two periods and that these successive mean rates decline as the waiting period increases. If we apply these n, mean rates each to its own set of simultaneous maturities each rate will accumulate a total equal to the maturity value of its set of notes. But we should have successive residual values greater (up to, but not including maturity) than those found by revaluing the annuities each at its effective rate. The tables above illustrate this. Three two-period annuities of unit rent each are brought to yield .02, .024, and .03 respectively. This investment is simultaneously regarded: (1) as two sets of notes of three notes each, one set maturing in one period and one in two periods; (2) as three, two-period, unit rent annuities; and (3) as a single holding.

It will be noted that the total interest earnings for the two periods is the same no matter which way it is calculated. Only a different distribution results. The general mean, being, in a sense, an average of averages, will always be smaller than the mean for early maturities and greater than that for later maturities. Between the exclusive limits, date of acquisition and date of discharge (or sale) the mean rates on simultaneous maturities will always give the largest book values and cumulative interest earnings, the separate purchase lot rates will always give the lowest book values and smallest cumulative interest earnings, and the general mean will produce figures lying between those found by the other two methods. If it can be argued that the general mean rate is the "correct" one to employ on concurrent annuities why cannot it be equally correct to apply a general mean rate to non-concurrent annuities? What revaluation rate should be employed on a holding of two .05 bonds of the same (serial) issue if one having five periods to run is bought to yield .06 and one having ten periods to run is bought to yield .055? Both in the case of the annuities and in that of the bonds the general mean rate will be affected by the difference in number of periods to run if we assume that the schedules of purchase lot yield rates on the concurrent holdings are identical with the like rates on the non-concurrent holdings.

TABLE I

EFFECTIVE RATES AND PRICES

Effective Rates	*One-period Note Prices*	*Two-Period Note Prices*	*Annuity Prices*
.02	$ .980392157	$ .961168781	$1.941560938
.024	.976562500	.953674316	1.930236816
.03	.970873786	.942595909	1.913469695
Price totals	2.927828443	2.857439006	5.785267449
Mean rates	.024650200	.024641975	.024644761

TABLE II

REVALUATIONS AND INTEREST EARNINGS

Rates Employed	*Value at end of: 1st period*	*2nd period*	*Interest earnings 1st period*	*2nd period*
Annuity rates	$2.927828443	nil	$.14256099	$.07217155
Note-set means	2.927851947	nil	.14258450	.07214805
General mean	2.927843983	nil	.14257653	.07215602

We have considered the m non-interest bearing notes maturing in n periods bought to yield i', i'', i''', . . . and m annuities, each having n rents, bought to yield corresponding rates. We can now mentally attach the i' yield annuity to the i' yield note, and so on and have m bonds bought to yield these rates. To find the rate i on the aggregate holding is simple if the bonds are alike. Merely find the average (arithmetic mean) cost of the bonds and find, from a bond table, the implicit yield. It may be noted that if this is done the error in Sprague's tables pointed out by Hatfield[2] will not occur. The error is not in the table; if the error exists it is in the mode of applying the table.

Thus far only concurrent investments have been treated. But if the formula for i in an annuity is fully spelled out and the proper coefficients are inserted as weights it is applicable not only to regular but to irregular determinate future receipts. The formula in its elementary form is applicable both to concurrent and to non-concurrent notes, bonds, annuities, etc. There is no inherent impossibility in equating i to a function of any given set of determinable future receipts. Needless to say the equation can become tediously long and its solution, humanly impossible, except by empirical bracketing.

The question of "theoretical correctness" deserves comment. As between accounting for the results of single purchase ventures and accounting for an aggregate holding is there an objective test of "theoretical correctness"? If so, what is that test? If the test, on the other hand, is subjective there cannot be one sole correct procedure unless all men agree in their primary judgments. One can think of circumstances in which he would prefer most of all an accounting for each of his separate ventures. Or one may like to have his bonds so valued individually as to assist in showing the possible advantage to him of selling at the market and buying others at the market. In the latter case one would want an accounting different from any of those discussed above. Other circumstances are thinkable in which any accounting other than for actual money receipts and disbursements would be very nearly useless. If anyone chooses to call another's primary subjective judgments wrong and his own right let there be reciprocity.

If Hatfield's assumption that the rate on the holding as an entirety should be employed, is accepted it seems in most cases to raise no quesion of adjustment at all. There is no need to find the separate rates on the purchase lots, to apply them separately, and finally to adjust the aggregate earnings and book value. It is just as easy to find the general mean rate for the entire holding as it is to find the rate on one purchase lot. It is found in exactly the same way, and, being found, has exactly the same set of properties as the yield rate on one purchase lot. If instead of the problem Hatfield put he had asked us to consider a single purchase of two bonds for $2,000 as consisting of one bought at 90 and one at 110 exactly the same paradox would appear.

There is nothing sacrosanct about the compound interest method of valuing investments. There is nothing enduring about it except the ideas attached to functions of the geometric series. The effective rate, i, can never be more than a convenient average. When, in periods of high rates, short time rates rise farther than the rates on long term issues, this means merely that a slightly increased long term mean rate is taken as the present equivalent of a high, short term mean rate to be followed, presumably, by an early reinvestment at a rate lower than the present long term rate. In employing any mean rate, just as in employing any other average, regard must be had for the properties of the defining formula. The paradoxical results of the compound interest formulas are not irreconcilable anomalies; they are only the

[2] Page 344 of the article cited.

vagaries of a useful, though imperfect, device. The various compound interest formulas afford much illustrative material for study in the theory of averages and in the theory of invariants.

A good many of the superficially perplexing features of the paradox would vanish if some words were banished from the professional vocabulary. We are all guilty of speaking of a "nominal rate of interest." That to which we attach the expression is a real rate, but it is not a rate of interest at all—either nominally or otherwise. Mathematically considered, it is only a ratio between one number and another. Practically considered, it is merely a convenient way of expressing the quantitative relation between the rent of an annuity and an arbitrary agreed figure. Legally considered, it has been taken to mean many things, some of which are economically absurd. We all speak of bond premium and bond discount when, as a matter of reality, a premium cannot exist unless the yield is negative. Discount always exists when the total cost is less than the total promised receipts. By custom we call the difference, par minus price, "discount" when price is the smaller and "premium" when price is the larger. "Par" applied to bonds is misleading. The idea of parity or equality of status as among the holders of like fractional parts of the whole issue is not important enough to justify the word sign. What is wanted is a term to suggest a single *lump sum,* rather than one to suggest parity or *equality.* "Principal" is almost as bad; for we habitually contrast it with "interest." Each rent of the annuity is "principal" in exactly the same sense as is the final lump sum. There is no denying that these usages have their conveniences—for which we pay in misunderstandings.

DEPRECIATION AND REPAIR COSTS

DR Scott

Writers in accounting mainly agree as to a necessary close relation between repair costs and depreciation costs. They do not agree, however, upon any theoretical statement of this relationship. The practice, frequently adopted, of making the allowance for depreciation large enough to cover both repairs and replacements merely serves to cover up the theoretical issues involved. At the same time independent treatment of the two costs is equally objectionable upon the ground that it ignores entirely the relationship between them.

In the following discussion it will be contended that an accurate allowance for depreciation must take into account probable repair costs over the whole life of the asset. It will be argued that the value of the asset is affected by both the amount and distribution of expected repair costs, and that, therefore, any accurate calculation of depreciation requires prediction of repair costs as well as prediction of the life of the asset and its scrap value.

In order that the investment in any asset may be profitable, it must afford returns large enough to cover the following:

(1) Replacement of the investment—depreciation in a normalized situation.

(2) A competitive net return upon the investment in the asset.

(3) Repair costs necessary to maintain the efficiency of the asset.

It is proposed here to show how these requirements are involved in a single problem covering depreciation and repair costs.

It should be remembered always that the value of an asset at any time rests upon the expectation of future incomes from it—upon putative and not actual incomes. If it is known in advance that in some years an asset will not afford its usual income, allowance will be made for that fact in the determination of its present value. But in the usual case it must be assumed that the annual income expectation for one year is as good but no better than that for another year.

If a new asset is worth $12,000, will last five years without any repairs and will have no scrap value, we can express its present value as follows—assuming a discount rate of 7%:

$$\$12{,}000 = \frac{X}{1.07} + \frac{X}{(1.07)^2} + \frac{X}{(1.07)^3} + \frac{X}{(1.07)^4} + \frac{X}{(1.07)^5}$$

Solving this equation we obtain $2,926.69 as a value for X which indicates what the annual income expectation from the asset must be in order to justify its purchase at $12,000 when the use of capital is worth 7% to the purchaser. Substituting this value for X, the equation becomes $12,000=$2,735.22+$2,556.28+$2,389.05+$2,232.76+$2,086.69. The value expiration or depreciation, of this asset will follow the rule for the diminishing value of an annuity. That is, the depreciation of the asset for the five years will be the above five terms taken in reverse order.

If a higher rate of discount is used in making the calculations, it will have the effect of making the depreciation smaller at first and larger at the end of the life of the asset.

If we change the above case by assuming repair costs for the respective years, the initial value can remain $12,000 only if the annual income expectation is enough larger to offset the repair costs. In this case, even with the same initial value of the asset, the distribution of depreciation cost charges may be quite different from the distribution in the previous case. It will remain the same only if repair costs are

evenly distributed over the life of the asset. If the repair costs increase towards the end of the life of the asset they will tend to make the depreciation of the later years less than it otherwise would be.

Assuming repair costs to be respectively \$25, \$50, \$60, \$75 and \$100, our original equation becomes as follows:

$$\$12{,}000 = \frac{(X-\$25)}{1.07} + \frac{(-\$50)}{1.07^2} + \frac{(X-\$60)}{1.07^3} + \frac{(X-\$75)}{1.07^4} + \frac{(X-\$100)}{1.07^5}$$

Solving the equation we obtain \$2,986.33 as a value for X indicating the amount of the annual income expectation before repair costs are deducted.

The value of the asset after one year of service under the conditions given may be represented by Y in the following equation:

$$Y = \frac{(\$2986.33-\$50)}{1.07} + \frac{(\$986.33-\$60)}{1.07^2} + \frac{(2986.33-\$75)}{1.07^3} + \frac{(2986.33-\$100)}{1.07^4}$$

Solving this equation we obtain \$9,878.67 as the value of Y and the difference between \$12,000 and \$9,878.67 or \$2,121.33 is the depreciation of the asset during its first year.

The foregoing process may be repeated throughout the life of the asset. Each year the number of terms used, that is the number of remaining years, becomes one less. At the same time the power of the denominator of each remaining term is reduced by one each year.

In order to allow for scrap value it is necessary to add another term to the equation but the method is not otherwise changed. The expected scrap value will be discounted to the same degree as the expected income of the last year.

It may be argued against the above procedure that it is complex even though it involves only very simple mathematical processes. Clearly, it is not as simple as the straight line method. However, if the volume of the investment in question is large, and accuracy is essential, the results obtained by this method should well repay the greater effort expended in applying it even though there were no simpler process of arriving at those results.

But the fact is that the process here described can be very much simplified in its application. Since the value of the asset always is dependent upon expected incomes from it, the calculation of depreciation can likewise be based upon future expectations. The only items necessary to calculate the depreciation for a given year are as follows:

(1) Value of the asset at the beginning of the year.
(2) The annual income expectation.
(3) Expected repair costs for the year.
(4) The discount rate.

Clearly the return from an asset over its whole life must cover depreciation, a net return upon the investment in it and repair costs. But since value always rests upon future expectations, this statement will hold also for each year of the asset's useful life. When repair costs may be expected to be heavy they cut into expected incomes from the asset and so the decrease in value of the asset in such years tends to be correspondingly lower. In fact depreciation may become negative and the asset then is worth more at the end of the year than it was at the beginning of the year. A new equation may therefore be written for the calculation of depreciation as follows:

Annual Income Expectation = Net Income + Repair Cost + Depreciation.

In this equation the annual income expectation is determined by the solution of an equation similar to the first one given in the foregoing procedure. The "net income" is the value of the asset at the beginning of the year multiplied by the rate of discount used in calculating the annual income expectation. The "repair cost" is given on the basis of previous experience. The one remaining and unknown term is

the depreciation which is to be determined.

Take, for illustration, the above case. The value of the asset at the beginnnig of the first year is $12,000. The annual income expectation from it is $2,986.33. Repair cost is $25 and the rate of discount used is seven per cent. Then the equation for the first year of the life of this asset is as follows:

$2,986.33=$840+$25+Depreciation.

Solving this simple equation we find that the depreciation is $2,121.33 and the depreciated value of the asset at the end of the year will be, therefore, $9,878.67.

As this process is repeated from year to year the "annual income expectation" remains constant, the "net income" decreases, "repair cost" is as determined by previous experience and "depreciation" is always the net result.

The reader can prove readily for himself that this simple method affords results which are identical with those obtained by the solution of a series of equations for finding the value of an asset at the close of each year.

Sometimes assets, such as expensive machaines, require a complete overhauling or rebuilding. Experience may show a probable life of 15 years for a machine but that it probably will need to be overhauled in its tenth year.

This overhauling cost is not unlike ordinary repair costs, only larger. The treatment accorded such costs by older methods has never been theoretically satisfactory. The method here presented, however, takes account of such unusual cases with the same precision that it affords with respect to ordinary repairs. In applying this method rebuilding costs are treated in precisely the same way as repair costs shown above. For illustration let us assume that an asset has a depreciated value of $6,000 at the beginning of its tenth year; that it has an annual income expectation of $1,800; that expected rebuilding costs for the year are $1,800, and that the discount rate used is six per cent. If we were to make up an equation for the value of this asset at the beginning of the year, the first term on the right side of the equation would be as follows: ($1,800—$1,800)/1.06. Since the value of this term is zero, the whole value of the asset, which is here assumed to be $6,000, must rest upon the expected incomes of later years. And since those expected incomes have been discounted at six per cent the value of the asset at the end of the year will be six per cent larger than it was at the beginning of the year, on account of the nearer approach to realization of such incomes. Expressing these in terms of the above described equation applying to them we have the following:

$1,800=$360+$1,800+Depreciation.

Solving this equation we find the value of the depreciation term to be —$360. The journal entry necessary to record this negative depreciation would be as follows:

Reserve for Depreciation........	$360.00	
Income from Appreciation...		$360.00

This item of income is somewhat comparable to that which arises through the amortization of discount on bonds owned. If operating expenses were otherwise fully met, this income would be net income available for distribution. If a depreciation fund had been accumulated to offset accrued depreciation, the following entry would be in order:

Cash	$360.00	
Depreciation Fund		$360.00

Thus cash would be released for the payment of dividends.

If in the foregoing case rebuilding costs had been $1,440, the first term on the right side of the equation would have been ($1,800—$1,440)/1.06. The value of this term would accrue to $360 in the course of the year and this would afford a six per cent return upon the value of the asset at the beginning of the year; still assuming that value to be $6,000. Under these circumstances, the value of the asset would be the same at the end of the year as at the beginning.

If the cost of rebuilding had been $2,100 and the income expectation still $1,800, the appreciation of the asset would have been $660. The journal entry to record this appreciation would have been as follows:

Reserve for Depreciation	$660	
Income from Appreciation		$360
Repair Expense		300

A corresponding entry to adjust the depreciation fund, if one were maintained, would have been as follows:

Cash	$660	
Depreciation Fund		$660

Of this amount, $360 would be available for distribution and the remaining $300 would go to finance that portion of the expected rebuilding cost not covered by the income expectation of the current year.

Whenever rebuilding costs are expected to exceed the income expectation of a given year, the rebuilding cost or repair burden of the year will be divided. The amount of the excess will be shifted to other years in the form of depreciation charges. If depreciation is being calculated upon a large number of similar assets it is feasible to set up a reserve for repairs again which to charge all expenditures for repairs and rebuilding. Credits to such a reserve and corresponding debits to expense would be based upon the expectation of repair and rebuilding costs except when such expectations exceeded the income expectation for the period. In this exceptional case the charge to expense would be the amount of the income expectation for the period. The difference between this sum and the total expected cost would be credited to the reserve when the asset is written up to its appreciated value at the end of the period in question. In the above case, for example, the $300 adjustment would be credited to Reserve for Repairs instead of being credited directly to Repair Expense. Such adjustments would be credited directly to Repair Expense only if it were the practice to charge actual expenditures for repairs to the expense of the period in which they are incurred. The policy adopted in this matter, it will be noted, does not affect the partial shifting of rebuilding costs to the expenses of other years.

If it be assumed that the process of rebuilding the asset occupies an entire fiscal period, there can, of course, be no income expectation for the asset in that period. In such an event, the appreciation of the asset will be the entire expected rebuilding cost, plus interest upon the value of the asset at the beginning of the period.

It will be noted that in all of this discussion it has been assumed that repair costs are payable and income from the asset becomes available at the end of the year. If a greater nicety of calculation were desired, a shorter period could be used. An alternative method would be to make the allocation within the year upon a straight line basis.

Sometimes it is not possible to make full use of a newly acquired asset because its capacity is in excess of that of other equipment with which it must be used. If it is estimated that such an asset will be used to only 50% of its normal employment during its first year and 75% during its second year, allowance may be made therefor in the calculation of the annual income expectation from the asset. This will be done by using ½X instead of X in the term representing the first year's use and ¾X in the term for the second year. This will have the effect of reducing the depreciation burden of years in which the asset is not fully utilized. The depreciation of other years will be correspondingly heavier. Similarly, a fractional part of X may be used for the year when it is expected that an asset will be out of use for a considerable period while it is being overhauled.

It has been argued here that each asset must each year afford an expectation of income which will cover the three following items:

(1) A net income upon the value of the asset at the beginning of the year.
(2) Expected repair costs for the year.
(3) Depreciation.

If there is no income expectation from the asset for a particular year, its depreciation becomes negative. The asset appreciates by an amount equal to the expected repair cost plus a net income on the value of the asset at the beginning of the year. When such appreciation takes place, the depreciation burden of the other years of the asset's life will equal the difference between its cost new and scrap value, plus the amount of the appreciation.

If the income expectation just covers the net income and expected repair cost items, depreciation of the asset will be zero. The asset will neither depreciate nor appreciate.

It has not been the intention here to present a method of accounting for depreciation and repair costs which is a panacea available for universal publication. In the accomplishment of technological results, business management frequently finds it inadvisable to use the most highly developed equipment available for the purpose in hand. Any such tool must be adapted to the circumstances under which it is to be utilized. And so in this discussion, all that is intended is the presentation of a development of accounting method which is in line with the current general trend of business management. As management becomes more forward looking and its powers of prediction and control increase, its tools must necessarily become more precise.

BUSINESS POLICY AS RELATED TO ACCOUNTING

CHESTER F. LAY

At a graduation banquet in a school of commerce in Chicago, a play was given in which one of the graduating class was represented as having become insane under the strain of university training in business and economics. Someone was curious to know what, if anything, the insane student would remember from all he had been taught. On being questioned, the insane character promptly responded: "supply and demand; other things being equal; it all depends." In the phrase "it all depends" is expressed the almost infinite variety of business practice and policy. What effect has policy upon accounting, or accounting upon policy? Careful examination of the literature of accounting does not uncover any great interest in the subject. The Accountants Index and Supplement do not even use the word "policy." The literature of management includes some incidental treatment, much of which is contradictory, there being no agreement as to even the meaning of the term policy; differences of opinion as to the nature and purpose of accounting prompt the comment that in pursuing this inquiry the managerial viewpoint has been assumed. Whether or not angels would fear to tread this trackless territory the writer believes that someone must rush in for tentative exploration, because of the possibility that accountants may find an opportunity to extend their usefulness and standing by studied application of accounting method, broadly interpreted, to the critical problems of policy formation and administration with which executives are faced in an era of rapid change. Only the circumstance of having teaching interests in both fields of accounting and business policy, can explain this discussion, which is frankly intended to stimulate interest in further inquiry rather than to settle any phase of the problem.

The most pressing problem facing large enterprises today (and growing concerns of medium size), is not that of manufacturing, selling, nor financing, but is the problem of controlling the organization through co-ordination, so as to achieve teamwork in executing a united program. Natural growth, consolidations, development of chain systems, and other influences have increased the size, complexity, and territorial dispersion of individual concerns and have created a situation out of which methods of managerial control arise from necessity. Failure to perfect such methods may be the factor which will limit continued increases along those lines. As concerns come to number employees by hundreds and thousands, it is obviously necessary to provide for accountability; the tremendous growth of accounting in value and esteem has followed. While records indicating integrity and ability are essential, it is also necessary that such qualities be exercised within set fields, and with primary emphasis upon company—instead of departmental loyalty; consequently the technique of managerial organization has been extended to provide control through co-ordinated action. The growth of knowledge as to "best" ways of business operation has thrown into the spotlight the tendency of individuals to follow their own inadequate methods. Gains from adopting methods of "best" practice, together with the value of consistency of action within the fields set by sound organization, is rapidly forcing the deliberate adoption of company and departmental policies to establish control over objectives and operating methods.

Such use of policies is an extension from the field of factory operation to the zone of administration, of that principle of Taylor—inspired management which requires that positive control be secured over

all conditions and operations, leaving nothing to chance or to the whims of individual judgment. Orderliness in management is possible in the midst of the great complexity of modern business problems, only by standardizing or fixing as constants, all possible variables in managerial situations. In this way, day to day opportunism may be avoided, and Taylor's second principle requiring planning before performance becomes possible on the administrative plane. The passing of the stage of pioneering, exploitation type of enterprise in America, and the coming of an era of more intense competition, with profit possibilities found primarily in refinements of management and operations effecting lower costs, inevitably work for the application of so-called scientific management to the realm of top-control. That the three means suggested for such control—accounting—managerial organization—and policy formation, are actually being used for such purpose is definitely indicated by the growing acceptance of the managerial viewpoint in accounting literature; by the emergence of the controller as administrative aid to the chief executive; and by the rapid adoption of budgetary methods in the management of our leading concerns, budgets being essentially statements of company policy in accounting terms.

A policy has for its purpose the control over the operating force by delimiting the field of action, in the manner that legislation acts as a directive control in relation to the executive division of governments. Before any profitable consideration can be given to specific instances of the relationship of accounting and policy, the concept of policy must be much more exactly defined than has yet been done. Is policy concerned with the goals to be reached (Sheldon), with the means of attaining them (Thompson), or with both (Webster, Robinson, Person)? Does a policy exist only when empirically promulgated (Thompson), or only when "fact-founded, . . . based on definite and accurate knowledge" (Robinson), or in either case, in accordance with common usage? Can it be said that policy exists if it is changeable? The writer believes that these questions can only be answered by distinguishing between policies as to their subject matter. Regulations designed to express the understanding of the company as to its relation to its social environment, and especially to its economic setting, will (or should) deal with such matters as relations to social (including governmental) control; customers (service concept); industrial relations; competitors (co-operative activities); technical management (recognition and promotion of management on a professional plane); and the anticipation and adaptation to social and industrial trends (progress of the arts and sciences, and the business cycle). Such may be called general or "why" policies, and, in the present stage of management, are likely (1) to be concerned only with objectives, (2) to involve attitudes rather than procedures, (3) to be determined empirically rather than scientifically, and (4) to be quite stable over long periods of time. Accounting is not likely to seriously influence such policies. Or regulations may designate *what* general methods shall be used, such as complete manufacture versus assembling of automobiles, selling at wholesale only, versus wholesale with retail outlets also, and self-financing versus borrowing for expansion. Such "major" policies may be determined or evaluated upon the basis, in part, of accounting reports and analyses. Their characteristics are similar in some respects to those of general policies, but are more like departmental policies. Such, in turn, are ordinarily concerned with problems arising in the special operations within the department, and may authorize practices like pre-planning in the factory, high pressure selling methods, and taking of cash discounts. Departmental policies are likely (1) to be concerned with procedures instead of objectives, (2) to be determined systematically if not scientifically, and (3) to be changeable to cope

with changing conditions or the increasing knowledge of principles of business practice. They are "how" policies in contrast with "what" and "why" policies already mentioned. The value or cost of such policies may be indicated by the accountant by designing special records or account classifications to accumulate relevant data, and by greater care in the design and interpretation of accounting reports bearing on these day by day problems of detail policy. Since controls must be definite, while most problems of policy are difficult to decide, involving a large element of human judgment, consideration must be given to the location of responsibility for policy formation and execution.

Policy formation may be termed legislation. In corporations the directors are presumed to legislate and to exercise general control over the chief executive. Sheldon would assign policy determination to the directors entirely; McKinsey and Robinson are more practical, warning against meddling by directors in actual management. A number of students of organization would put policies squarely up to the executive (Barth, Clark, Kendall, Kester, White, and Williams). Others emphasize the necessity of executive consultation with subordinates (Brown, Follett, Tead). One flatly stands for recognition of the controller as the planning specialist within the executive division and therefore the only one both impartial and capable of sound legislation (Mazur). Others (Barth, Kester, McKinsey) would have him *suggest* policies to line executives; while others (McKinsey, White) assign to the controller the task of co-ordination of all policies, by compilation, at least. Dean Hotchkiss has made the discerning statement that "important staff work and important executive work tend to merge," and that the staff man "is forced to think in terms of executive responsibility." General or "why" policies are likely in practice to be formed by the directors and chief executive; "what" policies by the chief executive in conference with department heads (which should always include the controller, or one who performs his functions); and departmental or "how" policies, by departmental executives in conference with their assistants and the controller. Accounting work in providing data for policy formulation will be affected by the location of responsibility for policy decisions, primarily in respect to report preparation. If the controller is responsible for policies the number and variety of reports may be very different from those required in case responsibility is diffused from the directors down to the last straw-boss.

Responsibility for policies being established, a sound method of forming judgments is essential. Quoting H. S. Person, "Such problems of management are critical, perplexing, and exacting in their demands for rational determination on the basis of facts, which are numerous and difficult of ascertainment and valuation." Thus both the quality of thinking and adequacy of facts are emphasized. Examination of the growth of the scientific method of forming generalizations may throw light on methods for formulating business policy. Armchair hypothesis or expert guessing represents the first stage; survey methods of fact finding, classification and interpretation follows; and the most advanced method is that of research for solution of definite problems, by either the experimental or "philosophical" (synthesizing) methods. In business, policies have been formed upon the basis of economists' hypotheses until recently; we are still in the stage of accounting (ratio studies) and statistical classification of business facts; while in an increasing number of cases, definite problem research by scientific methods are being undertaken for determination of sound policies. Preliminary surveys use accounting method; experimental study uses engineering and accounting techniques; while coordinative research synthesizes economic principles, accounting costs and ratio facts, statistical correlations and forecasts, and the like. The di-

rector of the Taylor Society has stated that "in all the sciences utilized by management . . . . the outstanding achievement of recent years has been the improvement in the technique of finding and measuring facts." Accounting today goes further, and by classification of relevant information, often expressed in trend or ratio form, operates practically as a preliminary step to the forming of conclusions. The thinking process by which sound generalizations (policies) are reached is carried a large part of the way by the accountant. The accountant's device of reporting variations from standard costs, budgeted sales quotas, and the like, also makes possible straight thinking by the executive or director, through use of the "method of residues" as named by Mill, now commonly referred to as the "principle of exceptions." The technique, partly accounting, partly administrative, which probably affords the greatest aid in policy determination, is that of budget preparation, assuming estimates to be submitted from the botton of the force upwards. As Follett suggests, many policies are in this way self-formulated before reaching the chief executive. Investigation of "business policy as related to accounting" leads directly to consideration of the influence of accounting in policy determination.

There are certain limitations upon the usefulness of accounting as a tool for fashioning policies. Delay in presenting accounting data may make it impossible to determine the policy needed in time to put it into effect. Or the basis of valuation used may be conventional (as cost), while some other basis (as replacement) may be needed. The usual accounting assumption of conservatism requires the executive to make mental adjustments when reading accounting reports. Comparative accounting reports usually include no correction for changing dollar values. Most accounting systems provide classifications entirely inadequate to relate cause and effect even in terms of organization responsibility, and much less in terms of individual policies. Budget statements of policy are seldom reliable if based solely on past performance as shown by accounting records. Enthusiasts for ratio or other forms of accounting analysis are sometimes inclined to use over-elaborate methods upon insufficient data which may lead to erroneous conclusions. The human factor frequently assumes a vital place in considerations of policy, and this accounting does not evaluate. Other limitations might be cited, but may be omitted here, except the final charge that the accountant, especially if his viewpoint inclines to the mechanical or mathematical phases of his work, is likely to be unable to make worth while suggestions as to policy, from the lack of constructive imagination. These limitations are so weighty as to seriously question whether, without changes in his technique, the accountant can satisfactorily advise executives as to sound policies.

To what extent are scientific or orderly methods (whether involving accounting or not) actually used in formulating company policy? No quantitative data on this question is available. The writer had a small part in the survey of management soon to be published by the National Bureau of Economic Research. If the complete data were not available considerable light might be thrown on this dark corner. One of two Texas companies with national reputations for sound management, uses strictly scientific methods; the other does so only partially. The managing director of the Taylor Society has suggested that firm histories or logs be kept, including discussion of policies and reasons and methods involved in their formulation. Until such private records are made available to students of management, expression of expert opinion may be of value. The president of General Motors Corporation has stated that his experience shows that facts are too little considered in making decisions. In that organization, however, the three fundamental principles to which the managerial success of the Corporation is attributed by the president, are the

recognition of the equities of all concerned, getting the facts on all problems met, and analysis of the facts with an open mind. Henry Ford openly favors ignoring facts, in the usual sense of the term, under some circumstances. He says, for example, "Our policy is to reduce the price . . . . to a point where we believe more sales will result. *We do not bother about costs.* The new price forces the costs down . . . . (and) . . . makes everybody dig for profits. We make more discoveries concerning manufacturing and selling under this forced method than by any other." Robinson of California concludes that the usual business forms its policies by checking against the personal experience of individual executives, that of similar firms, through observation and study. McKinsey, however, reports a trend quite generally observed, toward closer control through budgets, which are only accounting expressions of policy, and represent deliberate effort to plan scientifically.

While recognizing the limitations of accounting in policy making, and the rather slight extent to which it is deliberately used for that purpose, it must be insisted that in many cases the accountant may directly assist in policy formation; although accounting data taken alone are rarely sufficient to conclusively settle the matter. The following suggestions are offered merely as samples illustrating the variey of policy problems with which accounting may be of help, providing the accountant will study to extend his techniques to cope with such problems of management.

In manufacturing, increasing mechanization requires rational selection of equipment replacement policy. A committee of the American Society of Mechanical Engineers has developed a formula for calculating such a policy. In their research, accounting data was used primarily, including estimates of value of increased production based on actual costs. In the textile industry the ordinary machinery ledger is found to enable clearer thinking as to replacement where complete detail is recorded. In deciding policy as to full use of plant facilities, percentages of emergency volume to ordinary volume is of value, and may lead to a policy of maintaining excess capacity of say, 30%. Cost accounting may indicate cost of unbudgeted idle capacity, together with its causes, so that policies of correction may be established. This may be done by predetermining total overhead and hourly machine rates on both "idle" and "running" bases; production being charged with running rates while cost of unused capacity is charged to idleness accounts classified according to cause of such as lack of labor, materials, power, or sales orders. Simplification of commodity lines offers possible savings which accounting analysis on such basis may forecast.

Cost technique applied to merchandising activities may point to need for the same policy in the trading field. In many cases carrying full lines means actual loss sustained on certain minor lines. Cost finding by commodities, if extended so as to secure net profits, can provide needed stop-loss orders. Analysis of common ratios showing turnover of merchandise and expense percentages classified by lines is valuable even without a complete system of costing for sales. Should sales be expended in certain territories? Cost accounting data compiled on territorial basis would be adequate to supply the net profit test needed for a rational decision. Such data may, however, point to an entirely erroneous decision in case overhead is allocated on actual instead of budgeted sales. Whether advertising should supplant other selling methods is commonly said to be a matter of faith alone. Yet a decrease in total selling expenses while advertising appropriation is increased, argues otherwise. Analysis of sales by branded versus unbranded lines of a manufacturer should suggest a possible policy of advertising to consumers direct, to force dealers to stock the merchandise under the manufacturer's label. Various other departmental policies may require accounting data for wise de-

cision. If past experience or published cost data makes estimates possible, estimated profit and loss statements may be used to decide whether to favor mail-order sales versus traveling salesmen, to deliver or hire it done, and the like. Such budgeted accounting reports require assumptions as to volume of business, and the classification of expense as fixed and variable in percentages.

The simplification policy may be applied by the finance department also. Assuming satisfactory credit standing, should all possible customers be added on the books? Analysis of accounts receivable and comparison with bad debt losses may reveal conclusive arguments for limitation, as in one recorded case in which 80% of sales were made to the top 25% of the customers, while only 2% of sales were made to the bottom 25%, who, however, provided nearly 100% of collection troubles. What credit policy should prevail respecting customers already overdue? Indiscriminate refusal of sales to such customers may lose profitable business. Some work by an accountant, in analyzing past due accounts receivable by age, commodity, and causes (where known), with careful appraisal, by the credit manager, of the customers' financial prospects, may indicate the value of the customers' continued business, and may also suggest new or improved sales, delivery, or collection policies. Analysis of individual accounts, such as losses on installment receivables, may affect credit policy. A California department store sells furniture on installment only to customers who have, or are eligible for, ordinary charge accounts. Finance policies as to borrowing and dividends may be mentioned as obviously influenced by the work of the controller in encouraging the establishment of standard balance sheet and income statement ratios.

Accounting designed to secure results and costs classified according to groups or to individual employees, makes feasible the policy of wage payment according to accomplishment. Whether to use bonus remuneration for executives may be decided according to the possibility of budgeting net profits for organization units to set base pay. Unit labor costs "before" and "after" installation of incentive payment methods should indicate the advisability of a high wage policy. The Delco-Light Company justify their group bonus policy on records of doubled output per man. Accounting is the limiting factor preventing use of motivating wage policies for employees whose performance it is difficult to measure, such as engineers, and accountants themselves.

Accounting affects general policies also. A policy which will in large measure determine other policies of general administration, relates to the emphasis to be put upon managerial ability as contrasted with that of the operative force. Creation of a large management division increases "overhead" obviously; yet the complexities of problems met by enterprise may make economy of managerial ability suicidal in the long run. (See J. M. Clark) Accounting may throw some light here through comparison of net profits ratio trend during period of change from one policy to the opposite. Such cases are on record, and the experience of similar firms may aid in judging the desirable policy for the enterprise in question. Trade associations may be able to supply accounting information of this sort not otherwise available.

Budgeting, as an outgrowth of accounting, is of prime value in setting up a policy of "balanced" organization, preventing uneven growth of sales and manufacturing. Preparation of the budget estimates, and consideration of budget reports during the budgeting period, may prevent the chief executive himself from over emphasizing one department to the detriment of others. Accounting reports in comparative form afford the executive his principal technique for securing coordination and balance, by setting into the foreground variations from the budgeted or norm amounts, thus encouraging the use of the "exception prin-

ciple." What should be done to adapt operations to long time and business cycle trends? Each concern is affected somewhat differently from all others by such changes. To formulate policies which will enable the business to prevent losses during depression and maintain sanity during prosperity, the executive needs information as to the influence of the cycle upon such matters as physical condition of the plant, cancellation of orders, collections, working capital, and manufacturing costs. Statistical services and lectures from economists cannot supplant the records of the firm's own experience as a basis of planning adjustment to similar conditions as they recur. A policy opposed to that of adaptation to the cycle may be established, requiring stability of growth regardless of the opportunities afforded by boom periods. The Dennison Company has decided that a ten per cent annual increase in volume is more profitable than a policy of ungoverned expansion. The cost accountant may afford very definite aid to an executive who is determining policy as to volume of business under cyclical or seasonal changes in conditions. This may require the accountant to go beyond his records of actual costs, and to analyze both financial and physical data bearing upon "differential costs." Without elaborate analysis, however, the cost accountant may often approximate differential costs in the form of "direct costs," since overhead may vary but little with the proposed increase in output. By such estimating of costs under various sets of conditions, the executive may be able to decide whether to expend the manufacturing plant, or to change prices. Policies of cutthroat competition and of price discrimination have been based upon a recognition of differential costs; it is worth noting that the practice of distributing overhead at standard rates regardless of volume of business tends to prevent such "evils" by making it appear unprofitable to take business unless it bears its full share of overhead. In other words, the executive who looks to the accountant for facts bearing upon policy of expansion of operations and price cutting is given cost information which arbitrarily indicates that such policies are unwise. The executive, not the accountant, should decide as to policy.

Accounting supports policy not only in its formulation, but also in its enforcement. Policies, whether of objective or procedure, are not "guaranteed" by statements of what is desired. The controller being primarily responsible for budgetary procedure, is of primary assistance to the executive in policy administration, since the budget is a summarized expression of practically all company and departmental policies. Being expressed numerically in the budget policies are made definite; and if the estimates are properly made by conference of all executive divisions affected, they are understood in advance. The controller, or other budget facilitator, keeps the policies before operating men by periodically rendered accounting reports as to failure or success in carrying them into practice. If reports are designed to meet the needs of each executive, such items as returns and allowances to customers, and spoilage in manufacture show the chief executive where policies need his attention; and departmental executives are warned by items of peculiar import to them, such as purchase discounts in the case of the finance manager. Such reporting during the budget period enables the chief executive, or the executive (or budgetary) committee to rationally adjust operations to trends and the business cycle. Mention should be made of the value of such reports in developing executive timber "from the ranks," and in facilitating a policy of democracy in management.

The relationship of policy and accounting have been examined by noting the influence of accounting in the formulation and execution of policies. To approach from the opposite side and to consider in detail the relation of business policy upon accounting would involve some repetition, and is not necessary. If the concep-

tion of accounting as a service technique to be made available to those who formulate policies, is once accepted, the effect upon accounting reports, system design, cost accounting, and even upon the formulation of accounting principles may be at least partially seen. Certainly such a viewpoint will tend to destroy the accountants preference for conservatism rather than accuracy, his predeliction toward conventionality of expression in reports rather than their adaptation to the needs of executives for whom they are prepared, and his comfortable anchorage to historical fact rather than the uncertainties of estimates and forecasts. But accounting is, after all, not merely fixed set of principles and procedures, but is rather to be thought of as one of a trinity of control techniques which modern conditions are developing as steps toward scientific management of business on the administrative plane, policy, organization, and accounting, inextricably inter-related.

It may be feared that all such control devices tend toward undesirable centralization of power—even toward dictatorship —in business; and that such techniques may be but weapons which will be used to enforce arbitrary power; instead of being tools forged for the development of an impartial *science* of amnagement for which we all are now giving our best efforts. While it is true that policy, organization, and accounting can all be used dictatorially, from consideration of best practice in budget administration, in which all three techniques are merged, it is evident that the combined judgment and will of all responsible executives are used, illustrating democratic rather than dictatorial formulation of objectives and plans. Mary Follett has exposed the "illusion of final authority" in her critical examination of the processes by which executives rubber-stamp decisions previously reached by subordinates of the line or staff upon the basis of relevant facts. Facts so assembled often create a condition in which no other decision is possible, and in which the chief executive finds that use of such orderly processes as accounting and organization in the formulation of judgments or policies, binds him along with his subordinates to conformity with "the law of situation." Filene and Dennison managements are illustrative of a number which openly accept this viewpoint. The hopeful view, therefore, seems to be supported by actual practice as well as by the new philosophy of management.

SHALL ACCOUNTING INSTRUCTORS INDULGE IN OUTSIDE PRACTICE?

C. L. Raper

Can the accounting instructor who has little or no practice on the outside do the best teaching of Accounting courses? Can the Accounting instructor who has important practice on the outside do the best teaching of Accounting courses? I take it that the question under consideration involves the quality of Accounting teaching in college rather than the quality of Accounting practice on the outside.

As I understand it, the purpose of Accounting instruction in college is to train students in the principles and practice of Accounting. This is the purpose whether the instruction is of the more elementary type or whether it goes into the more advanced phases of the subject.

In considering Accounting teaching in college, at least two groups of students should be held in mind:

a. The student who plans to go into some kind of managerial, selling, or finance work, and who has no thought of entering the profession of Accounting.
b. The student who plans to become an Accountant—public or private.

The relative proportion of theory and practice might well vary for these two groups of students. For the first group of students, the Accounting courses should give considerable slant toward general business conditions, toward organization, toward finance, and toward marketing. For the second group of students, the Accounting courses should give a deeper understanding of accounting principles and practice from the point of view of the professional Accountant as well as a deeper understanding of the conditions under which business is carried on and of the legal limitations of business operation.

Can the Accounting instructor who has little or no outside practice do the better teaching for either of these groups of students or for both of these groups of students? Can the Accounting instructor who has important outside practice do the better teaching for either of these groups or for both of these groups?

In answering these questions I have no thought of bringing up the qualifications of the Accounting instructor as such. I take it for granted that the Accounting instructor who has little or no outside practice has the qualifications to do effective outside practice but that he chooses to give all or most of his time to teaching.

In answering these questions, I think two aspects of Accounting teaching should be considered:

a. The efficiency of college administration.
b. The efficiency of college teaching.

From the point of view of college administration, I think it is clear that generally the Accounting instructor who has little or no outside practice can fit into the scheme and schedule more readily, and perhaps more effectively, than the Accounting instructor who has important outside practice. Not infrequently it is necessary for the Accounting instructor who has outside practice to have a special schedule of teaching and office hours; and at times such a special schedule disrupts the schedules of teachers in other departments of the college and the schedules of students in the Accounting Department itself. From the point of view of the Dean's office, I have no doubt that the Accounting instructor who has little or no outside practice can be more satisfactorily adjusted in his work than can the Accounting instructor who has important outside

practice. I should say, however, that this administrative difficulty is not the most important thing.

From the point of view of the efficiency of the Accounting teaching—and this is by far the most important thing about the question, I think it may be accurately said that much of the teaching by the Accountant who has important outside practice is less effective because of the fact that such an Accounting instructor becomes more interested in outside practice than he does in college teaching. Not infrequently the instructor who has important outside practice regards his college teaching as only secondary. Not infrequently such an Accounting instructor gives his students the reactions which he gets out of his practice at the time and not the reactions which come from a broad view of the whole field of Accounting practice.

I am inclined to say in conclusion:

1. That college administration is easier and more satisfactory when the Accounting instructors give most of their energy and time to college teaching. This administrative ease and satisfaction should, however, always be regarded as a secondary thing.

2. That the schedules of the instructors in other departments and the schedules of students are more satisfactory and effective when the Accounting instructors have no special days or hours for their courses, in order to enable them to look after their outside practice. This question, while it is more important than that of administrative ease and efficiency, is not, however, fundamental.

3. That outside practice may become the thing of major interest in the mind of the Accounting instructor and that his college teaching may become entirely secondary. This is a thing of vital importance. I think it may be stated safely that, whenever the Accounting instructor makes his outside practice his vital interest and his college teaching of slight importance, an immediate readjustment should be made for the sake of effective college teaching.

4. That whenever the Accounting instructor can do good outside practice and can do equally good college teaching, the results are effective and satisfactory. Some of these results may be stated as follows:

a. That the Accounting instructor who has important outside practice may have many effective illustrations of Accounting principles and practice to give to his students; and that his illustrations are generally of greater vitality than are the illustrations used by the Accounting instructor who has little or no outside practice.

b. That the fact of his having good outside practice makes it possible for the Accounting instructor to pick out, for his students, the best things in Accounting principles and practice. The Accounting instructor who has little or no outside practice does not as readily know the best things in Accounting principles and practice.

c. That the fact that the Accounting instructor has good outside practice gives him a better standing in the eyes of his students, his colleagues on the faculty, and in the community; and that such a standing makes his teaching more valuable. The Accounting instructor who has little or no outside practice oftentimes has the reputation of being only a theorist. This reputation detracts from his value as an instructor.

d. That the fact of good outside practice makes it possible for the college or school to secure in its teaching service better accountants for relatively small salaries; and that this is an important asset.

5. That the college administration should make serious effort to secure in its teaching service Accountants who have important outside practice, provided always that such Accountants can teach Accounting principles and practice in a vital way, and provided always that such Accountants take their college teaching task with a large amount of serious interest.

THE ACCOUNTING EXCHANGE

A number of members of the Association have for some time urged the establishment of a department devoted to accounting theory and practice, and to teaching problems and methods. In inaugurating this department the editor looks forward to contributions from the Association's members and other readers of the Review. *For the present, contributions may take the form of original problems, with or without solutions, letters to the editor, or brief articles—complete in themselves or calling for solution or comment from readers. Perhaps a regular feature of this department will be an original problem in each issue, which may be used for classroom purposes; in that event it may be desirable not to publish solutions, but to issue them, upon request, to instructors only. It will be the primary object of* Accounting Exchange *to present material of value to teachers of accounting and others interested in the development of accounting theory. C.P.A. problems, and questions of auditing practice, covered as they are by well-established departments in other accountancy publications, will, it is hoped, be avoided, unless they relate to methods of conveying information to the management of a business or to the public generally. Suggestions from readers of the* Review *will be most welcome.*

A Problem Calling for a Statement Showing Changes in Working Capital

Following are data from which the reader is asked to prepare *a statement of application of funds, a statement of changes in working capital,* or—what shall the analysis of balance sheet changes be called? Little has been said by accounting authorities as to this important statement and a standardization of terminology and form is highly desirable. The best one of the solutions submitted to the editor will be published in the September or December issue of the Review. Comments on the statement of application of funds apart from solutions are also desired. Communications should be in the hands of the editor before August 15.

Comparative balance sheets appear on page 132. Succeeding paragraphs explain certain balance sheet items.

(1) The reserve for bad debts applies to 30-day accounts receivable. An addition of $3,000.00 was made to the reserve in 1928 through charges to profit and loss while $189.67 was credited to the reserve during the year, representing accounts collected but charged off in previous years. A total of $125,432.65 has been collected on balances of customers' accounts outstanding at the beginning of the year.

(2) Installment accounts and unearned income are analyzed at the top of page 133.

The only account not collected in due course in 1928 was a 1927 account standing on the books on January 1, 1928, at $2,350.67. The customer defaulted on all subsequent payments but only a portion of the property was recovered, $1,550.67 being charged to bad debts, $642.20 to the deferred credit account, and the balance of $157.80 to finished goods.

(3) The reserve for inventory losses at the end of 1927 was set up in anticipation of subsequent losses on finished goods which proved to be $9,675.22. The latter amount represents the excess of the lower of cost or market at December 31, 1927, over prices actually received upon sale in 1928, and has been included as an extraordinary loss in the profit and loss statement of 1928. A sum of $20,000.00 was added to the reserve at the end of 1928 for similar reasons.

BARBER MANUFACTURING COMPANY

Comparative Balance Sheets

Assets	December 31 1927	December 31 1928
Cash on hand and in bank	$ 26,475.81	$ 32,664.32
Liberty bonds	3,300.00	
Accounts receivable (30 days)	132,984.56	245,542.03
Accounts receivable (installment)	78,436.58	130,010.45
Finished and partly finished stock	62,987.46	51,114.37
Raw materials	36,874.93	106,383.11
Prepaid Insurance	2,346.80	2,863.29
Treasury stock	3,500.00	
Discount on bonds	13,500.00	10,800.00
Discount on stock		1,000.00
Investment in A. B. Sales Company	52,563.81	55,063.81
Sinking fund assets	10,000.00	11,775.00
Bonds in hands of sinking fund trustees		10,000.00
Land	20,000.00	30,000.00
Buildings	89,465.48	112,434.19
Machinery and equipment	134,883.75	141,676.67
Goodwill	100,000.00	75,000.00
Total Assets	$767,319.18	$1,016,327.24

Liabilities	December 31 1927	December 31 1928
Bank loans	$ 50,000.00	$ 275,000.00
Accounts payable—raw materials	39,013.72	57,184.57
Accrued wages	2,340.00	6,743.21
Accrued factory expenses	3,140.10	7,564.20
Accrued general expenses	1,422.00	2,435.70
Federal taxes accrued	23,984.23	6,688.95
Reserve for loss on purchase commitments	58,473.21	38,983.47
Reserve for bad debts	5,675.28	4,897.25
Reserve for depreciation—buildings	12,185.61	18,756.48
Reserve for depreciation—machinery and equipment	26,748.97	32,030.66
First mortgage 6 per cent bonds	100,000.00	100,000.00
Unearned income on installment contracts	21,230.55	39,661.64
Capital stock—common	300,000.00	300,000.00
Reserve for possible inventory loss	15,000.00	35,000.00
Sinking fund reserve	10,000.00	20,575.00
Capital surplus from revaluation	9,500.00	9,000.00
Earned surplus, December 31, 1927	88,605.51	53,605.51
Profits—year 1928 (Net, after deducting appropriations therefrom)		8,200.58
Total liabilities and capital	$767,319.18	$1,016,327.24

(4) The value of treasury stock, (repurchased in 1924 and carried at par) was transferred to general and administrative expenses for the year, having been given to an officer in lieu of a cash salary of $2,500.00. The excess of par over the value of the salary appears as discount on stock.

(5) Investment in the A. B. Sales Company which disposes of a part of the output was increased by $2,500.00 due to the declaration of a dividend on December 1, 1928, payable January 15, 1929.

(6) The First Mortgage 6 per cent 10-year Bonds were sold as of January 1, 1927, at 85. According to the terms of the trust agreement a yearly installment of $10,000.00 is to be paid to a designated sinking fund trustee on December 31 of each year. Two cash payments have thus been made in 1927 and 1928. On January 2, 1928, the trustee purchased ten $1,000.00 bonds of this issue at 88 and the resulting loss of $150.00 was charged to profit and loss for 1928. The bonds thus purchased have been held alive in the fund by the trustee and the coupons maturing June 30 and December 31, 1928, were collected by him on those dates. In addition, interest totalling $50.00 was credited to the fund by the trustee in 1928 and $75.00, representing trustee's fees and expenses, was deducted.

Year of Sale	Balance of Installment Accounts December 31		Average Gross Profit Ratio	Deferred Credit December 31	
	1927	1928		1927	1928
1925	$ 5,995.23	$	20.60%	$ 1,235.02	$
1926	18,766.53	7,227.74	28.41	5,331.57	2,053.40
1927	53,674.82	21,435.81	27.32	14,663.96	5,856.26
1928		101,346.90	31.33		31,751.98
Totals	$78,436.58	$130,010.45		$21,230.55	$39,661.64

(7) Reserve for depreciation—Buildings:

Balance January 1, 1928			$12,185.61
Add—4% on	$ 79,465.43....	$ 3,178.62	
5% on	10,000.00....	500.00	
2% on	22,968.76....	459.38	
Total on	$112,434.19		4,138.00
Total....			$16,323.61
Less—Improvements added during year tending to prolong life of building			2,567.18
Balance December 31, 1928 .			$13,756.43

(8) Reserve for depreciation—Machinery and Equipment:

Balance January 1, 1928			$26,748.97
Add—10% on	$123,476.85....	$12,347.69	
5% on	11,406.90 (scrapped during year) ..	570.35	
5% on	18,199.82....	909.99	
Total on	$153,083.57....		13,828.03
Total			$40,577.00
Less—Machinery scrapped during year ($11,406.90), charged in part to 1928 operations			8,546.32
Balance December 31, 1928.			$32,030.68

(9) The capital surplus account was created at the time the bond issue was floated and represents additional building value disclosed by appraisal. The original amount of this appreciation was $10,000.00; this has been depreciated at 5 per cent rather than 4 per cent, the building being about 5 years old at the beginning of 1927. The yearly credit of $500.00 has been applied in reduction of depreciation expense.

(10) During 1927 and 1928, large purchase contracts were entered into on the strength of a declining market. In both years, however, the market further declined due to unforeseen conditions. The Reserve for Loss on Purchase Commitments was set up for the first time at the end of 1927, the provision therefor being charged to profit and loss for that year. At the end of the year 1928 the balance of $38,983.47 was composed of—

Balance January 1, 1928	$58,473.21
Less—Amounts charged thereto upon cancellation of purchase contracts ($49,469.74 applicable to 1927)	53,896.95
	$ 4,576.26
Add—Additional provision December 31, 1928	34,407.21
Balance December 31, 1928	$38,983.47

It is expected that the unused balance as at January 1, 1928, will cover cancellations applicable to 1927 which have not yet been paid.

(11) A summary of the profit and loss account for the year 1928 appears on page 134.

(12) A cash dividend of 10 per cent was declared January 2, 1928, and paid February 1, 1928.

(13) All current liabilities at December 31, 1927, were paid during 1928 excepting an account payable for raw material amounting to $250.00, the bank loan, which was renewed, and the balance of the reserve for loss on purchase commitments, as shown in (10) above.

BARBER MANUFACTURING COMPANY
Summary of Statement of Profit and Loss
Year Ending December 31, 1928

SALES—			
30-day	$994,057.38		
Cash	10,265.43	$1,004,322.81	
Installment		165,479.87	$1,169,802.68
COST OF SALES—			
Raw Material inventory Jan. 1, 1928		$ 36,874.93	
Purchases		422,986.40	
Total merchandise cost		$ 459,861.33	
Inventory December 31, 1928		106,383.11	
Raw materials used		$ 353,478.22	
Labor (direct and indirect)		287,444.31	
Indirect expenses—			
Depreciation—			
Buildings (net)	$ 3,638.00		
Machinery	13,828.03	17,466.03	
Machinery scrapped		2,860.58	
Insurance		4,562.30	
Other manufacturing expenses		316,953.90	
		$ 982,765.34	
Add—Decrease in finished and partly finished goods inventory (less loss on realization charged to general expenses plus returned goods)		2,355.67	985,121.01
GROSS PROFIT—			
30-day and cash		$ 132,836.83	
Installment—			
1928	$ 20,092.86		
Future years	31,751.98	51,844.84	$ 184,681.67
Gross profit from 30-day sales and cash sales			$ 132,836.83
Gross income from installment sales (on receipts basis)—			
1925 accounts		1,235.02	
1926 accounts		3,278.17	
1927 accounts		8,165.50	
1928 accounts		20,092.86	$ 32,771.55
Interest received			6,321.01
Dividend receivable			2,500.00
Gross income from all sources (after deducting depreciation and loss of $2,860.58 on machinery scrapped)			$ 174,429.39
Less—Expenses—			
Provision for loss on purchase commitments		34,407.21	
Loss on inventory realization		9,675.22	
Bad Debts (installment contracts)		1,550.67	
Bad Debts (30-day accounts)		3,000.00	
Treasury stock paid to officer		2,500.00	
Other general, administrative and selling expenses		33,558.29	
Interest on bonds paid to bondholders		5,400.00	
Discount on bonds amortized		1,350.00	
Loss on bonds repurchased by trustee at Jan. 1, 1928		150.00	

Sinking fund expense (net)	25.00	
Other interest paid	12,348.52	103,964.91
Net profits from operations		$ 70,464.48
Distributed as follows:		
Reserved for sinking fund	10,575.00	
Federal income tax	6,688.95	
Reserved for inventory losses	20,000.00	
Good will written off	25,000.00	
Balance—per balance sheet	8,200.53	
Total, as above		$ 70,464.48

INTERNATIONAL CONGRESS ON ACCOUNTING

An event of importance to all teachers of accounting as well as the profession will take place during the six-day period beginning September 9: the third assemblage of the International Congress on Accounting at the Hotel Commodore, New York. Foreign visitors will include representatives, many of them allied with accountancy instruction, from all the principal European countries and from Canada, Mexico, Central and South America, and Japan.

Dean John T. Madden is now arranging the program, announcement of which will be sent all members of the association as soon as it is completed. The addresses will be in the form of papers printed in advance in French, German, and English and will be made available before the opening of the Congress. At each meeting the chairman will introduce the author who, instead of reading his paper, will lead a discussion of it. Those who wish to discuss papers should, if possible, register in advance with the Secretary, Professor Giles L. Courtney at New York University.

The Congress is being financed through sustaining and subscribing memberships costing twenty-five and fifteen dollars respectively. Address remittances to the International Congress on Accounting, 100 Washington Square East, New York City.

REVIEWS

The New Way to Net Profits, by Fred W. Shilbey. Harper and Brothers, New York, 1928. xvii, 213 pages.

This book, by a vice-president of the Bankers Trust Company of New York, is primarily a brief for scientific administration in business, more specifically for budgeting control.

Ten years ago scientific administration was derided as the theory of an efficiency engineer. Today it is common business practice. Five years ago budgetary control was merely a charming story to which business men half listened, an intriguing system, possible only of successful operation under ideal conditions. Today budgetary control is an essential part of any well-planned operating program.

The book includes chapters on market study, merchandising, distribution, the sales forecast, production planning, budgetary control, management, research, and analysis.

At the outset, the author points out that the master word of the new way to net profits is "coordination," coordination of production and expenses with sales, with a margin of profit definitely provided for. Making a sales forecast is, therefore, the initial step in budgetary control. The capacity of consumers to purchase is the essential consideration in the forecasting of sales. But willingness of consumers to purchase is almost as important a factor. This leads to a study of markets as they exist in consumers' minds, which necessitates close contact with consumers themselves.

The probable sales in units and classes having been estimated for the budget period (usually three months) the first problem in coordination is to adjust the rate of production in accord with the sales forecast and to plan the manufacturing processes so that the most constant flow of materials in the course of production shall be maintained. This involves a careful consideration of the inventory position and of purchase requirements.

As soon as the production budget has been made and purchase requirements released, the treasurer is in position to set up his cash budget. In addition, the general administrative department can plan its expenses so as to comply with its budgeted allotment.

Scientific administration demands also scientific merchandising and distribution, the application of research and analysis to all problems of the business, and a management thoroughly imbued with the new spirit. Scientific merchandising involves careful and constant consideration of quality, design, style, color, preparation, and service, so that consumer acceptance can be anticipated with reasonable confidence.

In the chapter on distribution the author comments upon such matters as the difficult position of middlemen in the present era of buyer's market, mail order and chain store developments, the value of trade names, advertising, the lessened importance of traveling salesmen. In the author's opinion, traveling salesmen will be few in number ten years hence; and there is yet hope for the small local merchants if they will arouse themselves and form groups about central purchasing organizations or mother stores.

In his conclusion, the author holds to the proposition that the success of an individual business is largely dependent upon the success of business as a whole and urges that all business men contribute to the supply of commercial knowledge, so that business planning can be accomplished and waste obviated.

The book is written in simple, readable style and is enriched by many actual illustrations from business.

J. L. SKINNER

Elementary Accounting, by Frank Hatch Streightoff. Harper and Brothers, New York, 1928. xi, 501 pp.

This book contains 28 chapters, each followed by numerous questions and problems. In the latter part of the book practice set material embodying 369 transactions and covering 3 months is found. Of these months, the first, October, deals with sole ownership and has 106 transactions to be transcribed into 7 journals and posted. While the student is doing this work it is expected that the fundamental principles of accounting applied to this situation and presented in Chapters 1 to 8 will be mastered. The content of these chapters is reflected by the chapter headings: The Nature and Use of Accounting; Buying and Selling; the Balance Sheet Profit and Loss; The Account and the Journal; Books of Original Entry and the Trial Balance; Adjusting Entries; Closing the Books.

The transactions of November reflect the transition of ownership to the partnership type by means of 105 transactions which the student is to book while becoming familiar with the principles of accounting set forth in Chapters 9 to 14, the subjects of which are: Reopening the Books and Controlling Accounts; The Partnership; Negotiable Instruments; Cash; Buying and Selling a Business; Review.

The activities of a corporation are represented by 158 transactions in December. While the student is concluding the practice set he is expected to study Chapters 15 to 23, entitled: The Corporation; Accounting for Capital Stock; The Manufacturing Statement; The Voucher System; The Factory Ledger; Depreciation; Surplus and Dividends; Bonds; The Sinking Fund. The text con-

cludes with 5 chapters dealing with Investments; Interpreting Fnancial Statements; Mechanical Aids to Accounting; Designing Sets of Books; and Review.

Practice set blanks, which measure 8½"x5½", are furnished for the journals, cash books, voucher register, check register, and ledgers. The text contains 153 forms which undoubtedly have been selected with care and will be valuable to the beginner. The reviewer is impressed with the probability of students of average ability, or less, getting lost in the detail. The statement of the fundamental principles of accounting are clearly and carefully made, and the reviewer believes that they are in accord with present accounting thought.

WESLEY JAMES MCCARTY

Bookkeeping and Accounting, by James O. McKinsey. Southwestern Publishing Company, Cincinnati, 1926. x, 416 pages.

The author states in his preface (p-3) that the purpose of the book is to serve as an introductory course in bookkeeping for use in secondary schools.

There are twenty-six chapter in the book. The first four chapters are devoted to an explanation of the basic business and economic factors and their bearing upon accounting practices; the need and object of accounting and a brief discussion of the simple statements of commercial enterprises. Nine chapters deal with the derivation, construction, purpose, classes, and analysis of accounts. Nine chapters give the need, purpose, and forms of original entries. Two chapters are devoted to practice sets and two chapters to explanation of business forms.

The author is to be commended upon the vast amount of understandable material used in illustrating and interpreting individual problems. The scope of elementary accounting is well covered and few phases of the subject are omitted.

Each chapter contains a discussion of principles, a list of questions, and exercise to illustrate the theory of content. The material is comprehensible and understandable. It offers a sufficient amount of practice data and each new phase is treated in detail.

The statement method of approach is used in introducing the work, and decrease and increase of accounts are given as a basis for journalism. The standardized method of practice are developed with the exception of one or two cases. Salary is charged at the end of the period to a deferred expense. This is certainly a questionable procedure for in this same deferred expense account are grouped all the other expense accounts and although the method used gives the correct net profit, it is very doubtful whether it is strictly in accordance with the best recognized accounting practices. This is done after developing the theory of the deferred expense account with the other more familiar accounts of that type and is, no doubt, an effort to simplify the students' introduction to the subjects of salary and other similar accounts.

It is the opinion of the reviewer that the discussions of separate principles are so widely segregated that the immature student will experience grave difficulty in properly co-ordinating the subject as a unit. The pupil of a secondary school is immature not only because of his age but also because of his lack of business experience. Only two practice sets are offered to enable the student to interpret the composite parts with reference to their relationship to the subject as a whole.

The author's methods are a drastic departure from past procedure in text books of the subject. The attempt to emphasize the managerial phase of the subject creates an academic atmosphere which is entirely new to secondary bookkeeping and which is certainly a very commendable part of his contribution.

ROLLA C. TRUMBO

Insurance, by S. B. Ackerman. Ronald Press, New York, 1928. ix, 609 pages.

In this book Mr. Ackerman, Assistant Professor of Insurance at New York University, has attempted a most comprehensive survey of the entire field of insurance and has assembled, in one book, a necessarily brief, but, nevertheless, clear and complete study of practically all the forms of coverage in general use in the insurance business of today.

After devoting a few pages to the fundamentals and needs for insurance, he plunges boldly into a chapter entitled "Life Insurance," and in fifty pages covers with surprising completeness, a subject upon which volumes have been written. Then, in the small space of forty-two pages he covers "Fire Insurance," in which he includes the "Standard Policy" and a description of the various forms and clauses usual to that division of the business. In an almost unbelievable way he seems to be possessed of the ability to cover a tremendous subject in a very short treatise.

Leaving these two major subjects, on either of which he might have spent the whole six hundred pages, he proceeds with a similar digest of the forms and fundamentals of some nineteen other "coverages," setting forth the salient points of each, and leaves the reader at least an understanding of the purposes and intent of the great variety of contracts which are being offered.

The last chapters of the book are devoted to a description of the types of companies, their organization and management and their methods of carrying on the business, including a chapter on rating methods. One chapter is devoted to, and most interestingly treats with the investment problems of companies, while still another devotes twenty pages to the legal aspects of the contracts.

As a book for ready reference and concise statements and interpretations of a very wide variety

of forms and contracts, it is most complete. Almost any of the subjects of the twenty-nine chapters might serve as the subject for a complete book, and in attempting the task of condensing so much into so small a space, Mr. Ackerman faced an almost overwhelming problem. In the volume he has produced what seems to me to be the most complete insurance reference work yet assembled in one volume, and offers to the student or the purchaser of insurance a reliable and understandable source of information in most compact form.

CLINTON W. ELWELL

Principles and Exercises in Accounting, by Nathaniel Filfus. Globe Book Company, New York, 1928. VIII, 192 pp.

It has long been felt in many quarters that there is great need for a book which would provide drill material for the student of Accounting who desired "a thorough and complete knowledge of accounting theory, principles and practice," and which at the same time was not too technical and difficult of comprehension by the typical high school student. The aim of this little book is to meet this need, particularly for the high school student, but in part also for the University student.

The book consists of ten chapters, as follows: 1. Branch Store Accounting; 2. Joint Enterprises; 3. Working Sheet; 4. Comparative Balance Sheets; 5. Statistics and Graphs; 6. Consolidated Balance Sheet; 7. Insolvency; 8. Investment Accounting; 9. Cost Accounting; and 10. Non-Commercial Organization Accounting.

Since the intention is largely to furnish drill material very little text discussion is provided, it being assumed that lectures and text book assignments will be given. And yet it is far from merely a book of problems. Each chapter furnishes illustrations of journal entries, statements, and solved problems which may be used as models for the large amount of excellent drill material provided.

The book has very much to commend it, and is certainly worthy of consideration. Written largely for high school purposes, the topics introduced are too few in number, and the treatment too fragmentary to serve for a general University course. And yet many of the problems available would be of great value in any University course.

W. S. KREBS

Industrial Organization and Management, by William B. Cornell. Ronald Press, New York, 1928. xiii, 658 pages.

The last few years have brought out a good number of sound books giving a direct approach to Management, and a few dealing with production in the groupings and terminologies of the economist. One therefore takes up a new book in this field with some doubt as to whether it will be found to say anything that has not already been well said.

While Professor Cornell has presented mainly the usual subject matter, more or less in the usual order, he has nevertheless made a real contribution. One's first impression in reading the early chapters is that the numerous commentaries illustrating and emphasizing the text represent the sort of thing that everyone has thought of, but on second thought their value appears: these do indeed dwell upon the things that no one can get far in Management without thinking of—but it must not be forgotten that the undergraduate student has not yet gone far in Management. They represent substantially the things that one would wish to say to the class, and to have the students use as a taking-off point for their own thinking, and they are said lucidly and simply. This obligato of commentaries is one of the good features of the book,—though by no means the only one.

The chapter on Chartering and Recording and the subsequent references to this same material give the student a good chance to learn to use charts rather than merely to remember them or wonder at them. The chapter on Irreducible Minimum of Functions is an excellent beginning along a valuable line which it may be hoped the author will expand still further in later editions—it reflects appreciation of the student's need of a simple and general start in a new and diversified thought area. Under the several chapters dealing with detailed activities there is again this feeling for the requirements of collegiate students. If the beginner in Management understands—as he can hardly fail to—the clear and simple outline of scheduling that is presented, he will not have much difficulty in expanding this nucleus of knowledge to a comprehension of the real and difficult art when he arrives in a factory.

It is quite likely that certain omissions are intentional, since the things omitted are largely of the sort that experience shows may well be presented by word of mouth in class discussion. For one example—the job is outlined, the kind of man is diagrammed and illustrated, and we may assume that it is left to the classroom to give the student a really vivid picture of what a works manager, or a master mechanic, or a foreman, does for a living day by day in average operation.

The book is an uncommonly interesting one, well suited to its main use as a background for teaching and presenting an unusual number of lucid interpretive commentaries adapted to clear and establish in the student's mind the bearing of the facts for which they furnish orientation.

JOHN GURNEY CALLAN

Betriebsanalyse, by Kurt Schmaltz. C. E. Poeschel Verlag, Stuttgart, 1928. 243 pages.

The author a year ago published a treatise on Analysis of Financial Statements in the U.S.A., with particular reference to the usefulness of these methods for German. This sub-title would not have been necessary, since this topic is not

taken up at all in the book. A survey of the American methods was given, a survey, which in spite of quite a few wrong interpretations showed a very close acquaintance with all the work done in this country. In the preface Dr. Schmaltz had promised to bring out soon another book showing methods developed in Germany and using financial statements of German concerns as illustrations and comparisons—an intention which was very valuable indeed.

This second book does not, however, keep this promise; Dr. Schmaltz again uses almost exclusively the material presented by Bliss and adds little to the theoretical part of the problem. But the careful and logical way in which the material is presented makes the book worth-while even to Americans who are familiar with the works of Bliss, Gilman, Wall and others. Using the financial statements compiled by Bliss and showing the trends revealed by them through Gilman's trend method, the author shows the influence of seasonal and cyclical fluctuation of business on different industries.

In dealing with the problem of capacity and the increasing and decreasing costs resulting therefrom, he evidently has not used John D. Black's "Production Economics," whose clear graphical presentation of the principle of diminishing and increasing economic input and output would have helped him considerably. His theory (based on Sombart) that the capitalistic process of rationalization tends to increase the turnover of the current assets and to slow up the turnover of fixed assets is very interesting: A theory which might be used to reconcile the divergent views of Böhm-Bawerk and Lexis with respect to the nature of the roundabout process of capitalistic production. But again no material is presented to prove this law. The same holds true for his contention that industries with a high margin of profit and a slow capital turnover show heavier fluctuations of earnings than industries in which this relation is the reverse. To mention Public Utilities only would endanger this belief.

Going into the petty business of calling attention to smaller shortcomings one has reason for complaining that the quotations do not often give the pages of the books used. The material from Bliss used on page 78 is evidently false, but since not even the title of Bliss's book is given, one cannot find out whether the orginigal or the copy is wrong.

Robert M. Weidenhammer

Principles of Business Law, by Dillavou and Howard. Prentice-Hall, Inc., New York, 1928. xxviii, 781 pages.

Within the last decade the problem of teaching commercial law to students of business has become more and more acute. The advantages, no less than the prestige, seemed to demonstrate to their graduates offering law in schools of business that a method analogous thereto should be evolved to meet the needs of future business executives. Accordingly they have sought to furnish materials calculated to develop the mental attitude and manner of approach held to be the characteristic result of presenting ideas in the dramatic way, and in the more assimilable and less mechanical form, of the case method. There are, however, equally familiar difficulties in the use of that method in collegiate schools of business. To be successful it presupposes students of intellectual maturity—generally college graduates—spending all their time—say three classroom hours and six preparation hours a day—in legal study. In most of our colleges the courses on business administration are open to undergraduates, and of those courses law—even if any at all is required for a degree—is certainly no more important than numerous other subjects. The reviewer is not acquainted with any curriculum wherein the required hours in law comprise as much as one-fifth of the academic hours required for a degree. Consequently there is no opportunity to analyze a sufficient number of judicial phenomena to lead by more induction to any helpful conclusion whatever. For this reason alone, therefore, the traditional case method would not suceed in such institutions. There are, however, other reasons also. The purpose of the case method is disciplinary, not informative, whereas in business courses the study of law is not to give practice in a certain kind of reasoning as an end in itself but is merely incidental to general business training. Intelligent laymen go wrong because they do not realize the dangers implicit in legal rules. They do not desire a legal mind nor do they admire what they know of legal reasoning. From these points of view instructors perceived the advantages of the crystallized ideas furnished by the text method, with its compact rules logically arranged, easily tabulated and readily remembered. The comprehensiveness and accuracy of this second hand knowledge seemed to them a more important part of the training of the business man than the experience of the case-method student laboriously developing from original sources his own summary of relatively fewer branches of the law.

The text under consideration employs what seems to the reviewer the best method of dealing with the problem, although no examination of the question can be thought complete which does not take into account the so-called "functional approach" which appears to treat the law in business problems as of merely casual or incidental importance. The advantage of this system is that it directs the attention of the student to the legal incidents of a problem which is being concurrently considered by him in its other aspects also. The doubt that might be felt is that unless the instructor were conspicuously able, both as teacher and as lawyer, the legal principles might, without

some more definite framework, prove too elusive to be captured even by the mature student.

The present book of 781 pages is made up of an introduction (14 pages) followed by 370 pages of text and 386 pages of cases (about 350 in number). The most important subdivisions are contracts (68 pages of text, 69 pages of cases), agency (35 pages of text, 37 pages of cases), negotiable instruments (72 pages of text, 69 pages of cases), business organisations (81 pages of text, 91 pages of cases), personal property (41 pages of text, 46 pages of cases), and real property (35 pages of text, 25 pages of cases). Especial praise is due to the form and content of the "review questions and problems" at the end of each chapter of the text illustrative of the scope of the preceding rules and of limitations upon their applicability.

One cannot avoid the conclusion that more material-textual as well as illustrative—should have been given to contracts. This subject occupies just 18 per cent of the former and less than 18 per cent of the latter. The authors themselves say that "the law of agency, suretyship, sales, negotiable instruments, corporations and partnerships are all superimposed upon the general principles of contract law." (21) It would seem that a larger proportion of time and space should have been spent upon this basic department, and less upon subjects so remote as carriers and so intractable and historically unrelated as real property law.

Another comment forcibly suggested again and again by the book is that the text is disproportionately large—370 pages, as against 386 pages of cases. In the judgment of the reviewer preliminary statements of universals should not in any sense be or purport to be a complete summary of what is to follow. The only synopsis a student can advantageously use is one made by himself as a résumé of texts and case read, and notes taken, by himself. What he learns merely through the eyes, without the necessity of constructive thinking in comparison, correlation, and recapitulation of his materials, has little permanent value. The text should merely point out clearly the exact nature of the succeeding problems, in order to arouse in the mind of the student those questions which are a condition precedent to learning. Even if a text is accurate, its pedagogic value is doubtful. What shall be said of one which (under the statute of frauds, 55) gives so important a matter as the parol evidence rule one sentence, without any reference to the three familiar and almost equally important qualifications; which states (194) that the promise constituting the acceptance of a bill of exchange must satisfy the requirement of a promise in a promissory note (whereas like an indorsement an acceptance may be in blank) [1]; which intimates (199) that *ultra vires* is always a real defence[2]; and which (233)—without any suggestion that it is not the universal rule—fastens upon the members of a defectively organized corporation and unlimited liability of partners?[3] How can difficult law of such constantly recurrent importance as the statute of frauds (including both fourth and seventeenth sections) be adequately dealt with in four pages of text (54-59) and six of cases (435-441) one of which, *Weeks* v. *Crie*, is concerned primarily with the distinction between entire and severable contracts? Why should not the text and/or the cases set out the fundamental principles of estoppel and of purchase for value without notice? What teacher of business law would not admit constant difficulties with students over these matters? What help toward their solution is presented by the text under review? Why should anticipatory breach (65) and supervening impossibility (66, 67) appear in Chapter VI ("performance of contracts . . . . conditions . . . . excuses for nonperformance") whereas other methods of discharge appear in chapter VIII ("discharge of contracts," chiefly occupied with bankruptcy)? Each of these is important in that it may affect rather the obligation of an existing contract than the terms upon which that obligation shall be held to come into being. Surely *in re. Wageman Piano Co.* (595), as to whether or not a preexisting contract duty to pay money is discharged by the execution, delivery and retention of a promissory note, should be found in the cases on discharge of *contract*, not among those upon the discharge of *negotiable instruments*. Again the text (262) and *Emanuel* v. *Bird* (635) state without qualification a rule repudiated more than once by the Supreme Court of the United States[4] whose views are controlling in bankruptcy where alone the problem is likely to be of any importance. What was the business of the firm in *Snively* v. *Matheson* (624) which was held to be a non-trading partnership? Which is the student to select (and why) as between (a) the provision of the Uniform Partnership Act (Sections 17, 41) that the liability of an incoming partner for preexisting obligations of the firm is to be satisfied only out of firm property, (b) the statement in the text (260) that such liability is to be paid only out of his "interests in the partnership," and (c) the rule in *Freeman* v. *Huttig Sash & Door Co.* (684) which differs from each of the foregoing?

Take again the cases used. The value of a case lies in its authoritativeness, in the definiteness of the factual situation presented, or in the cogency of the opinion. From each of these points of view either *Mississippi etc. Steamship Co.* v. *Swift* 86 Me. 248 or *Donnelly* v. *Currie Hardware Co.* 66 N.J.L. 388 is an ideal case to the distinction be-

[1] *Lawless* v. *Temple* 254 Mass. 395.

[2] Compare *Jefferson Bank* v. *Chapman-White-Lyons Co.* 122 Tenn. 415.

[3] Compare *Fay* v. *Noble* 7 Cush. 188.

[4] *Murrill* v. *Neill* 6 How. 414, and *Farmers' and Mechanics' Nat. Bank* v. *Ridge Ave. Nat. Bank* 240 U.S. 498.

tween an offer and a preliminary negotiation to be embodied in a formal record. Why should these serviceable and leading decisions be displaced in favor of *Van Hoosen* v. *Briscoe* (396) which seems almost wholly without value in any of these three particulars? So as to the substitution of *Savage* v. *Markey Machinery Co.* (417) *for Roscorla* v. *Thomas* 3 Q.B. 234. How can *Hendrickson* v. *International Harvester Co.* (403) or *Moreland* v. *Mason* (491) carry any particular weight when it does not appear in which of the fifteen courts in nine states the former, or of the eighteen courts in thirteen states the latter, was decided? It should not be thought that all the cases used are open to criticism. Aside from familiar decisions rightly appearing in most such collections are some excellent ones well known (at least to the reviewer) such as those on 409, 480, 491, 510, 523, 540 (2), 541, 573, 621, 629, 643, 669, 670, 681, and 727. But speaking generally neither the cases selected nor the form of presentation, is entirely unobjectionable. It seems to the reviewer that they are regrettably lacking as to those elements which give cases their chief value for the student, and particularly in that they fail to demonstrate how the judicial mind proceeds in analyzing facts and in stating the reasons which sustain the decisions thereon.

Hugh Barr

The Theory of the Cost-Price System, by Arnold J. W. Keppel. Introduction by J. A. Hobson. George Allen and Unwin, Ltd. London, 1928.

Although a small book this is a pretentious one. In the course of 183 pages, Mr. Keppel claims to "have gone deeper than any economist with whose works we are [he is] acquainted, both into the simple processes of Consumption and Production, and into the more complicated processes of Exchange and Distribution—though with a greater economy of words." We can only suppose that the author's acquaintance with works in the field of economics is not wide.

He produces a defence for the familiar socialist thesis that labor is the sole source of value and, consequently, the only cost of production. His problem is no less than the formulation of a plan for the reconstruction of the economic system in such fashion that goods and services will exchange for their "cost price"; i.e., the creation of a system in which rent, interest and profits, exploitation incomes, will no longer find a place.

In the introduction, Mr. J. A. Hobson lays it down that, most devotees of Economics, believing that their science is "well and truly laid" in a sound basis of law and principle, are scornful and impatient of outside thinkers however well meaning, who claim to test afresh the validity of their accepted foundations" Mr. Keppel has presented us with no good reason for supposing that this scorn should be moderated.

E. S. Mason

Effekten als Kapitalbeschaffungs mittel der Unternehmung, by Karl Theisinger. C. E. Poeschel Verlag, Stuttgart, 1928. 239 pages.

This study on securities as means of providing funds for a concern is rather limited in scope compared with most American treatises on this topic. It deals with the problem both from the standpoint of the concern, i.e., how to obtain capital with the minimum of restriction and at the least expense and from the standpoint of the investor, i.e., how to choose securities which assure the highest return on the invested capital together with the amplest assurance of the continued security of his funds. But Theisinger neither attempts to give a systematic survey on Corporation Finance nor one on Investments; he is only interested in the taxonomy of the securities, which he divides very simply in stocks and bonds and their variations. For the American reader the book has interest since it provides in a reliable manner information on the German forms of securities, but it would prove insufficient if consulted for legal advice. From a theoretical point of view Theisinger's treatise on rights, on the controversy of par value —no par value, and on the best denomination of stocks might be read with profit.

Robert M. Weidenhammer

Money and Banking, by John Thomas Holdsworth. D. Appleton and Company, New York, 1928. xix, 563 pages.

This is a revised, enlarged and, we may add, improved edition of a text that has been a standard favorite in its field for fifteen years. The fact that it has gone through five editions in that period is sufficient testimony to the intrinsic merits of the book.

The changes that have been made have been largely for the purpose of bringing it up-to-date. This has necessitated the introduction of certain topics that were not considered in the earlier editions, such as Morris Plan banks, investment trusts and automobile financing. The many necessary changes in laws and statistics have also been made.

The plan of organization of the book has been but little changed. It retains the two divisions, one on money and the other on banking. There has been some little rearrangement of the chapters. The appendix containing the text of the Federal Reserve Act has been omitted.

It is perhaps inevitable in a work of this size, dealing largely with factual material, that some errors should creep in. Some are because of oversight in revision, others are original mistakes. The name of the originator of the Morris Plan banks was Arthur J. Morris, not Albert J. Morris. (p. 190). The State Bank of Ohio was not a state-owned bank, as Professor Holdsworth assumes. (p. 17). It is no longer required that two members of the Federal Reserve Board be experienced in banking and finance (p. 472). At present the

Federal reserve banks hold all the required reserves of the member banks and not simply a "prescribed percentage." (p. 477). The statement that "By the year 1921 all the Federal reserve banks, except Dallas, had accumulated a surplus in excess of their subscribed capital" (p. 481) is true but misleading, inasmuch as at the present time only three banks have such a surplus. The authority to draw drafts to furnish dollar exchange has been granted to banks not only in South American countries but also to banks in Central America, the West Indies, and Australia. (p. 499). Other such minor errors could be pointed out.

As an historical and expository study of our monetary and banking systems the book is a very satisfactory piece of work. Professor Holdsworth's practical banking experience has led him to devote more attention to the internal workings of a bank than is usually given in one volume texts. The writer can testify from experience that students find the book readable and understandable.

In the opinion of the reviewer there are only two or less serious criticisms to be made against the book. One of these is that in the field of monetary theory it is weak or at least inadequate. Professor Holdsworth states that the value of money is determined by the principle of demand and supply and then devotes four pages to pointing out the sources of demand for and supply of money. Two and a half pages are devoted to a very simplified discussion of the quantity theory. Such a meagre treatment of monetary theory seems to the writer to be totally inadequate, both qualitatively and quantitatively. To devote thirteen pages to such a topic as clearings and collections under the Federal reserve system and only two and a half pages to the quantity theory throws the book somewhat out of proportion.

The other criticism is that there is too little consideration given to money and banking as social and economic institutions. The dominating rôle which money plays in our life, how it colors our thinking and directs our activities, the stragetic position of the banker in controlling in our economic system, all these considerations which are essential to a proper comprehension and evaluation of our monetary and banking systems are almost entirely neglected. However, the teacher who is interested in these aspects of his subject can give them the desired emphasis in the class discussion.

VIRGIL WILLIT

Income Tax Procedure, by William B. Castenholz. La Salle Extension University Press, Chicago, 1929. 180 pp.

In reviewing this book emphasis must be placed on the purpose of the author; viz., "It is not intended that this Manual shall be complete and comprehensive as to all income tax procedure, but that it shall deal with those ordinary and usual problems and features which concern the vast majority of taxpayers, whether corporate or individual." The author has adhered closely to this purpose and is to be complimented not only for what he has included but also for what he has so wisely excluded.

This book covers in a clear, concise, and nontechnical manner the essential facts regarding the Federal Income Tax law as it relates to individuals, partnerships, fiduciaries, and corporations. The matter discussed is well illustrated and, through the elimination of technical details, is easily understandable by a person who had no particular experience in or contacts with income tax matters.

The field for a book which gives to the person, who is concerned only in a minor way with taxation, a clear explanation of the fundamental principles of income taxation is large, and, in my opinion, this book is quite suitable for this field.

JAMES V. TONER

Business Balance Sheets, by Francis R. Stead. Isaac Pitman and Sons, New York, 1927. vii, 152 pp.

This book, written from the English point of view, is intended to present a non-technical discussion of balance sheet construction and interpretation.

The first eight chapters cover introductory matters, forms of financial statements, profit and loss accounts, the first scale, the counterpoise, profits and dividends, and directors and auditors. These chapters discuss theory and principles, and comprise thirty-six pages of the book. Chapter VIII presents examples of balance sheets of private concerns and Chapter IX those of companies. Accompanying each balance sheet is the author's criticism, usually in the form of a brief comment on the arrangement of the statement, its completeness, and the financial condition of the enterprise that issues it. In some instances statements of profit and loss accompany the balance sheets, and comments cover these as well the balance sheets. These statements are illustrative of representative industries although, as the author says in the preface, they are "entirely imaginary."

The author's theory relative to valuation as applied to the balance sheet is, first, that assets must be valued on a going concern basis as long as a business is prosperous; and, secondly, that in case of declining business asset values are probably declining much more rapidly than is the business. The book is written from the point of view of the going concern, consequently from that of going concern value also. As to questions arising relative to presentation of values on the balance sheet Mr. Stead says: "Opinions may easily differ on such points as reserves, provisions for depreciation, or apportionment of outlay between capital and expenses; and honesty of intention may be recognized even where a particular line of policy may not be fully endorsed. It is entirely a different matter,

though if there exist grounds for suspicion that underlying motives are lacking in integrity."

The discussion of principles governing balance construction is concise but interesting. The author observes the tenets of time-worn practice—a plan that all careful writers interested in advancing the usefulness of science should follow.

Although illustrations and standardized forms based on English legal requirements are necessarily of limited usefulness to the American reader, he may study the book with profit because it is based on sound theory. EARL A. SALIERS

Federal Tax Practice, by R. H. Montgomery. The Ronald Press Company, New York, 1929. 447 pages plus 310 pages of appendixes consisting of rules, forms, revenue acts, tables of parallel references and indexes.

The introduction to this very valuable and complete treatise contains the following paragraphs which so clearly explain the need for the text that they have quoted herewith.

"Accountants and taxpayers who have successfully handled tax cases in the Treasury and before the Tax Board found themselves, under the 1926 law, confronted by a new problem arising out of the designation of the Tax Board as being, in effect a court of record. Unless taxpayers decide *in advance* that appeals will *not* be taken from adverse decisions, the procedure before the Board is technical to a far greater degree than under the 1924 law.

"In many cases taxpayers are justified in deciding, in advance, to abide by adverse decisions of the Board. In that case it makes little difference whether or not all of the technicalities in what is known as a good record are observed. But there is a catch in this: in case the taxpayer wins (as he sometimes does), the *Commissioner* may appeal, in which case the taxpayer, in order to continue to enjoy the fruits of his victory, should have a perfect legal record or on appeal may lose on technicalities. He may have a successful operation on the merits and his case may die due to unskilful handling. The obvious deduction from the foregoing is that accountants and lawyers who practice before the Tax Board must fully acquaint themselves with the rules of evidence and procedure in order to insure a creditable record if and when an appeal to a Court of Appeals is necessary.

"Accountants and taxpayers who are not lawyers cannot practice before the courts, but it is possible for them to acquire enough knowledge to practice before the Tax Board and subsequently turn over to lawyers appeal records which are in good and sufficient form. But the value of experience in the trial of cases must not be minimized. A junior lawyer would not think of trying an important case until he had watched senior counsel try other cases, even though he were well satisfied with his theoretical training in evidence and trial practice. In order successfully to appeal there must be a record which satisfactorily presents all of the *legal* questions which the lawyer will wish to urge before the court of appeals. If one has not had good practical experience the legal requirements may be lost sight of in the stress of a hearing or trial which must proceed in an orderly manner and with reasonable speed. The Board in the past has shown commendable consideration for unqualified practitioners, but as time goes on the representatives of taxpayers may be expected to have a reasonable knowledge of the rules of practice and evidence, *and be able to apply their knowledge from memory, on their feet, and without special notice regarding the legal questions which will arise.*

"The author has endeavored to outline, in detail, in this volume all of the necessary and desirable steps to be taken to protect fully the interests of taxpayers. This volume is divided into three parts:

"I. Procedure in the Treasury.
II. Procedure in the Board of Tax Appeals.
III. Procedure in the Federal Courts."

The chapter headings of the several parts of this text indicates the character of the contents:

Treasury

Organization and Administration
Determination of Deficiencies
Assessment of Deficiencies
Payment and Collection of Deficiencies
Credits and Refunds
Penalties

United States Board of Tax Appeals

Organization
Jurisdiction
Pleading and Practice Before Hearing
Preparation for Hearing
Evidence
Practice at Hearing
Practice After Hearing

Federal Courts

Appellate Review of Board's Decisions
Suits for Refunds in Federal Courts

Certainly no one who professes to be familiar with the federal tax laws should be unacquainted with the content of this text. It is a most excellent reference book. The mere citation of the material include as appendixes and indexes shows the abundance of valuable reference data included in the book:

Appendix A, Provisions of the District of Columbia Code on Evidence.

Appendix B, Forms for Use in Board of Tax Appeals.

Appendix C, Revenue Act of 1928.

Appendix D, Revenue Act of 1926.

Appendix E, Table of Parallel References Showing Correspondending Sections of the 1926 and 1928 Revenue Acts.

Appendix F, Table of Parallel References Showing Corresponding Articles of Regulations 69 and 74-75.

The indexes included are as follows:

General Index.
Index to Sections of 1928 and 1926 Laws.
Index to Articles of Regulation 74 and 69.
Index to Treasury Department Rulings.
Index to Rules of U. S. Board of Tax Appeals.
Index to Rules of U. S. Court of Claims.
Index to U. S. Board of Tax Appeals Decisions.
Tables of Cases.

Accounting instructors teaching income tax work should by all means have this book on their reference shelves, and students should be made familiar with its content. It is recommended that every instructor engaged in practice have the text in his office library—he can not afford to be without it if he is actively engaged in federal tax work.

F. H. ELWELL

UNIVERSITY NOTES

BROWN UNIVERSITY

The following appointments have been made for the coming year:

Mr. C. C. Bosland of the University of Minnesota, Assistant Professor of Finance.

Mr. W. C. Beatty, of Wesleyan University, Assistant Professor of Economics.

Mr. J. T. Phinney of Williams College, Instructor in Economics.

Mr. A. K. MacRae, of the University of New Brunswick, and Mr. M. H. Conn of Brown, will be graduate assistants and Mr. Paul T. David of Antioch College fellow in economics.

Professor Ralph E. Badger has resigned his professorship in economics to accept a Vice-Presidency in the Union Trust Company of Detroit.

CARNEGIE INSTITUTE OF TECHNOLOGY

Assistant Professor William T. Crandell is to be on leave for the coming year to continue graduate study at the University of Michigan. His position will be filled by Mr. R. W. Coleman, who comes from the College of the City of Detroit.

UNIVERSITY OF CHICAGO

Mr. H. C. Daines has been appointed Assistant Controller of the University and will continue his teaching on a half-time basis.

Mr. C. Rufus Rorem has been engaged by the Committee on the Cost of Medical Care to study hospital finances and costs. He has been on leave of absence for the Spring quarter. Mr. Rorem has resigned as Assistant Dean of the School, and Mr. H. G. Shields, Assistant Professor of Business Education, will assume that work.

Mr. T. O. Yntema has been granted a year's leave of absence to teach in the Graduate School of Business at Leland Stanford. Mr. L. R. Edie leaves the University August 1 to become Vice-President of the Investment Research Corporation, Detroit, Michigan.

The School of Commerce and Administration is offering a series of lectures during the summer session on "Modern Trends in Business Management."

UNIVERSITY OF GEORGIA

Professor L. B. Raisty received his C.P.A. Certificate at the last November examinations.

INDIANA UNIVERSITY

Mr. A. L. Prickett has been re-elected Research Director for the Indianapolis chapter of the N.A.C.A. The chapter has just completed a piece of research on "Fixed Capital Records,—their Forms and Uses." Mr. Prickett will also serve as a member of the plant visitation committee for the national convention to be held at West Baden Springs, June 17-20.

Mr. Mikesell, instructor in accounting, is also taking over the field of transportation in addition to his work in accounting. The advanced accounting students have this year been given an opportunity to work for the Bureau of Business Research under Professor George Starr on a study of balance sheets and operating data for wholesale grocers.

IOWA STATE UNIVERSITY

It is planned to offer a new course in Governmental Accounting in the fall quarter.

A new accounting law has been passed by the present legislature, a copy of which was printed in the *"Certified Public Accountant"* for May. Under this act graduates of college or university courses in accounting are required to submit only one year of practical experience for admission to examination whereas others will submit three years. Also, field examiners in the government service or in the service of the banking or insurance departments are considered to be engaged in public practice.

UNIVERSITY OF LOUISIANA

Mr. Earl A. Saliers, formerly of Yale and Northwestern Universities and editor of the *Accountants Handbook*, has accepted the position of head of the Accounting Department for the coming year, in the newly organized School of Business Administration.

UNIVERSITY OF MINNESOTA

Three instructors in accounting are leaving the department this year. Mr. H. G. Fraine, who has served as auditor of student organizations in addition to his work in the department, has accepted a position in the investment department of the First St. Paul Co., where he will do analytical work. Mr. C. C. Hostrup, B.A. University of Michigan, will enter the estate department of the same company in similar work. Mr. Albert R. Mott

will continue graduate work, probably at the University of Michigan.

Of the 20 seniors who practiced public accounting during the winter quarter this year, a fair number have made permanent connections with the public accounting firms by whom they were employed.

UNIVERSITY OF NEBRASKA

Mr. Victor Z. Brink, instructor in accounting, has resigned to join the staff of Arthur Anderson and Co., Chicago.

NEW YORK UNIVERSITY

Dr. Edward Gasparitsch has been advanced to the rank of associate professor.

OHIO STATE UNIVERSITY

Mr. Olin E. Thomas has accepted a position as assistant professor of accounting at the College of the City of Detroit. He will begin work there at the beginning of the summer term.

Mr. W. D. Wall has been re-elected as director of the Ohio Society of Certified Public Accountants. Mr. J. B. Heckert and Mr. R. S. Willcox were re-elected to the board of directors of the N.A.C.A.

A chapter of Beta Alpha Psi will be installed here June 1.

UNIVERSITY OF PITTSBURGH

Mr. Carl J. Hammel, graduate assistant in accounting, is leaving the department. Mr. Allen J. Fisher, formerly of Carnegie Institute of Technology, will be a new instructor and Mr. Rolf Griem, C. P. A., is to be an instructor in accounting in the evening division.

Mr. Robert L. Ayars is developing a standard cost system for the undertakers of Alleghany county.

UNIVERSITY OF SOUTH DAKOTA

Mr. Lloyd E. Devol of the University of Michigan is to be a member of the staff during the coming year. Mr. Devol will have charge of courses in finance and elementary accounting.

UNIVERSITY OF TEXAS

Mr. Henry J. Rehn, Research Specialist in Accounting, in the Bureau of Business Research has been granted a leave of absence to study and teach at the University of Chicago.

Adjunct professor C. A. Smith will be on leave next year studying and teaching at Columbia University.

Professor Chester F. Lay will teach during the first summer session at the University of Washington, and has been granted a leave of absence to teach at the University of Chicago during the next school year.

UNIVERSITY OF UTAH

Professor E. E. Lorentzen, whose work has been principally in economic theory left the department at the end of the winter quarter to accept a position with the Goodrich Rubber Co. in the field of economic research.

Professor Earl J. Glade who has taught in this department for the past fourteen years is leaving the department this year to devote his full efforts to managing KSL broadcasting station. Mr. Henry Young is also leaving to enter the field of merchandising.

Mr. J. R. Mahoney, of Harvard University, will assume the work in economics theory and Mr. Cecil Oakey, now at the University of Texas, will take charge of the field of insurance. Mr. Oakey expects to receive his Ph.D. from California University this spring.

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